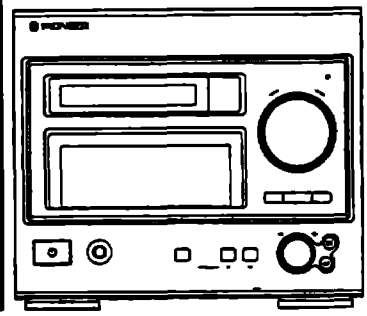
PIONEER
The Art of Entertainment

Service Manual



ORDER NO.
RRV1726

STEREO RECEIVER

SX-F21

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	SX-F21		
MY	O	AC220 – 230V	
NV	O	AC230V	

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MOD+LE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les piÂces de remplacement doivent avoir la mÉme dÂsignation.

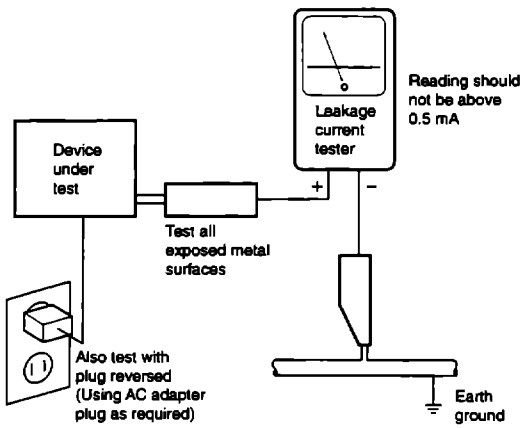
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
-
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

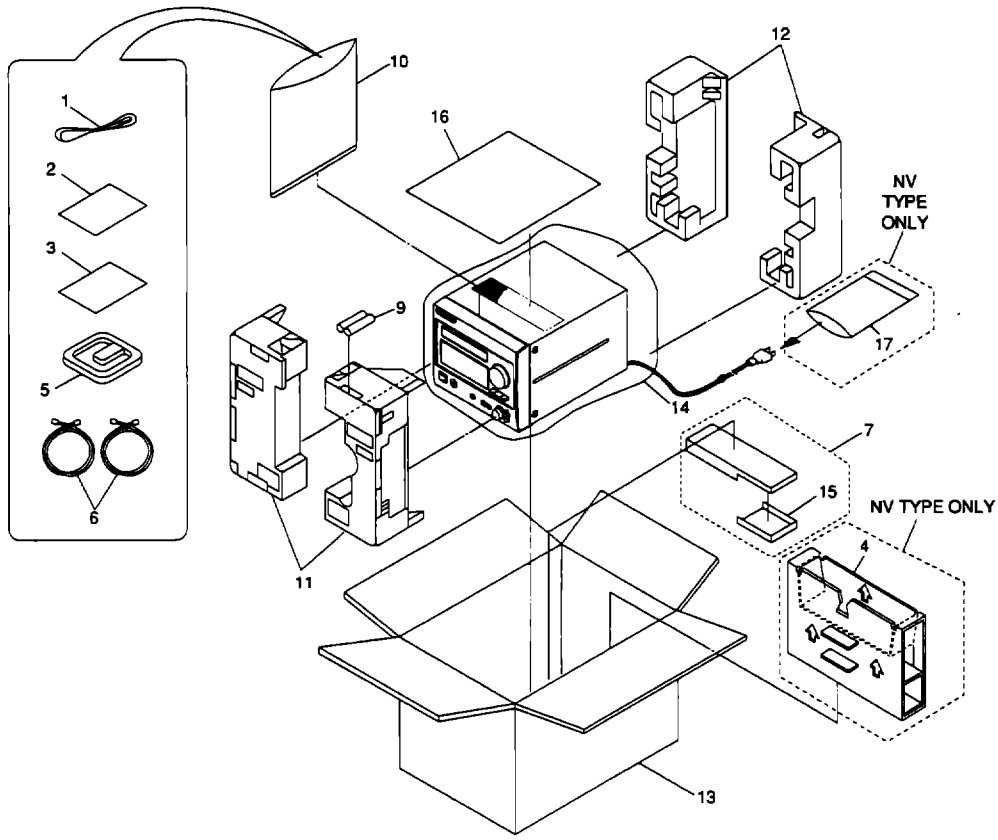
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS AND PARTS LIST

NOTES: • *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
• *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
• *Screws adjacent to ▼ mark on product are used for disassembly.*

2.1 PACKING



(1) Parts List

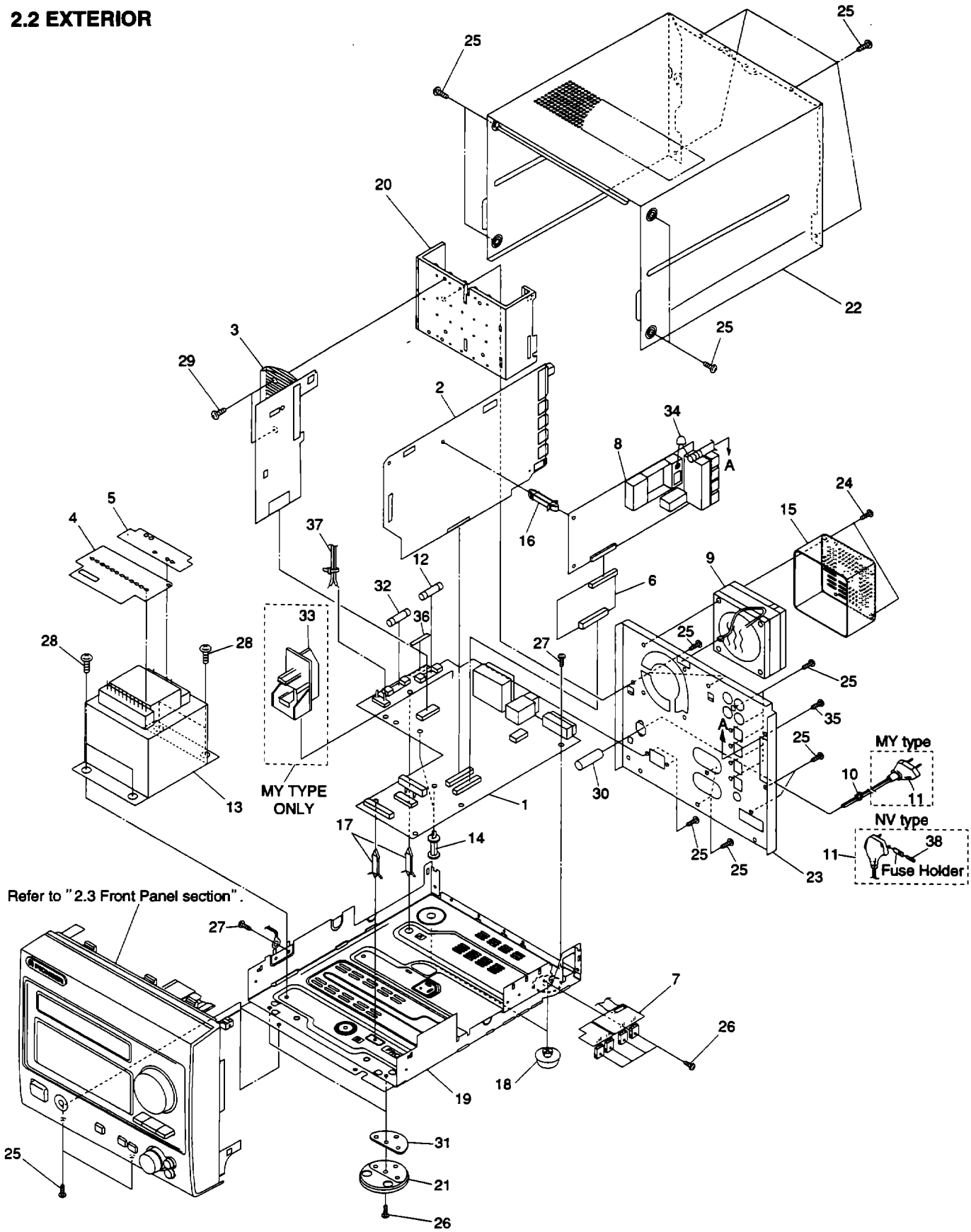
Mark	No.	Description	Parts No.
	1	FM T-type Antenna	ADH7010
	2	Operating Instructions	See Contrast table (2)
	3	Operating Instructions	See Contrast table (2)
	4	Spacer	See Contrast table (2)
	5	AM Loop Antenna	ATB7009
	6	Optical Fiber Cables (L = 0.5m)	RKX1031
	7	Remote Control Unit (CU – SX112)	RPX1121
	8	.....	
NSP	9	AAA/R03 Dry Cell Batteries	VEM – 022
	10	Polyethlene Bag 0.03X230X340	Z21 – 038
	11	Pad F SX	RHA1220
	12	Pad R SX	RHA1221
	13	Packing Case	See Contrast table (2)
	14	Mirror Mat Sheet 750X600X0.5	Z23 – 007
	15	Battery Cover	RZN1131
NSP	16	Warranty Card	ARY7008
NSP	17	Polyethlene Bag	See Contrast table (2)

(2) Contrast Table

MY and NV types have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.		Remarks
			MY TYPE	NV TYPE	
	2	Operating instructions (English/French/German/Italian)	RRE1156	Not used	
	2	Operating instructions (English)	Not used	RRB1181	
	3	Operating instructions (Dutch/Swedish/Spanish/Portguese)	RRD1191	Not used	
	4	Spacer	Not used	RHG1835	
	13	Packing Case	RHG1796	RHG1831	
NSP	17	Polyethlene Bag	Not used	RHL1021	

2.2 EXTERIOR


25
25
20
22
25
3
29
2
34
8
A
24
5
4
37
16
15
12
9
32
6
33
36
28
28
27
25
25
35
A
25
MY type
10
11
MY TYPE
ONLY
13
30
1
17
14
NV type
38
11
Fuse Holder
25
25
23
Refer to "2.3 Front Panel section".
27
7
26
18
19
25
31
21
26

(1) Parts List

Mark	No.	Description	Parts No.
	1	BASE-AF ASSY	RWZ4043
	2	SIDE-AF ASSY	RWZ4046
	3	F-POWER ASSY	RWZ4048
	4	TRANS ASSY	RWZ4051
	5	PRIMARY ASSY	RWZ4052
	6	RDS ASSY	RWZ4054
	7	REG ASSY	RWZ4055
	8	FM/AM TUNER MODULE	AXQ7058
	9	DC Fan Motor	AXM7003
	10	AC Cord Stopper	CM – 22B
⚠	11	AC Power Cord	See Contrast table (2)
⚠	12	FU1 Fuse (T800mA)	REK – 099
⚠	13	T1 Power Transformer	RTT1319
NSP	14	PCB Spacer	AEC1372
	15	Fan Cover	AMR7013
	16	Board Spacer	DEC1388
NSP	17	PCB Holder	PNW2100
	18	Foot	REC – 434
NSP	19	Chassis SX	RNB1122
NSP	20	Heat Sink	RNE1898
	21	Insulator F ASSY	RNK2231
	22	Bonnet SX	REA1265
	23	Rear Panel SX	See Contrast table (2)
	24	Screw	ABA7003
	25	Screw	BBT30P080FNI
	26	Screw	BBZ30P080FMC
	27	Screw	ABA7017
	28	Screw	BBZ40P060FCU
	29	Screw	ABA1024
	30	UL Tube	Z09 – 019
	31	Plate	RNM1050
⚠	32	FU2 Fuse (T2.5A)	AEK1058
⚠	33	CN11 AC Outlet 1P	See Contrast table (2)
⚠	34	C1 Ceramic Capasitor	CKDYB102K50
	35	Screw	ABA1047
NSP	36	Fuse Card	AAX1572
	37	Binder	ZCA – SKB90BK
⚠	38	Fuse (T5A)	See Contrast table (2)

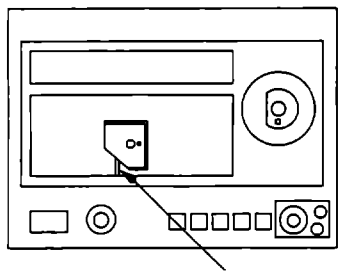
(2) Contrast Table

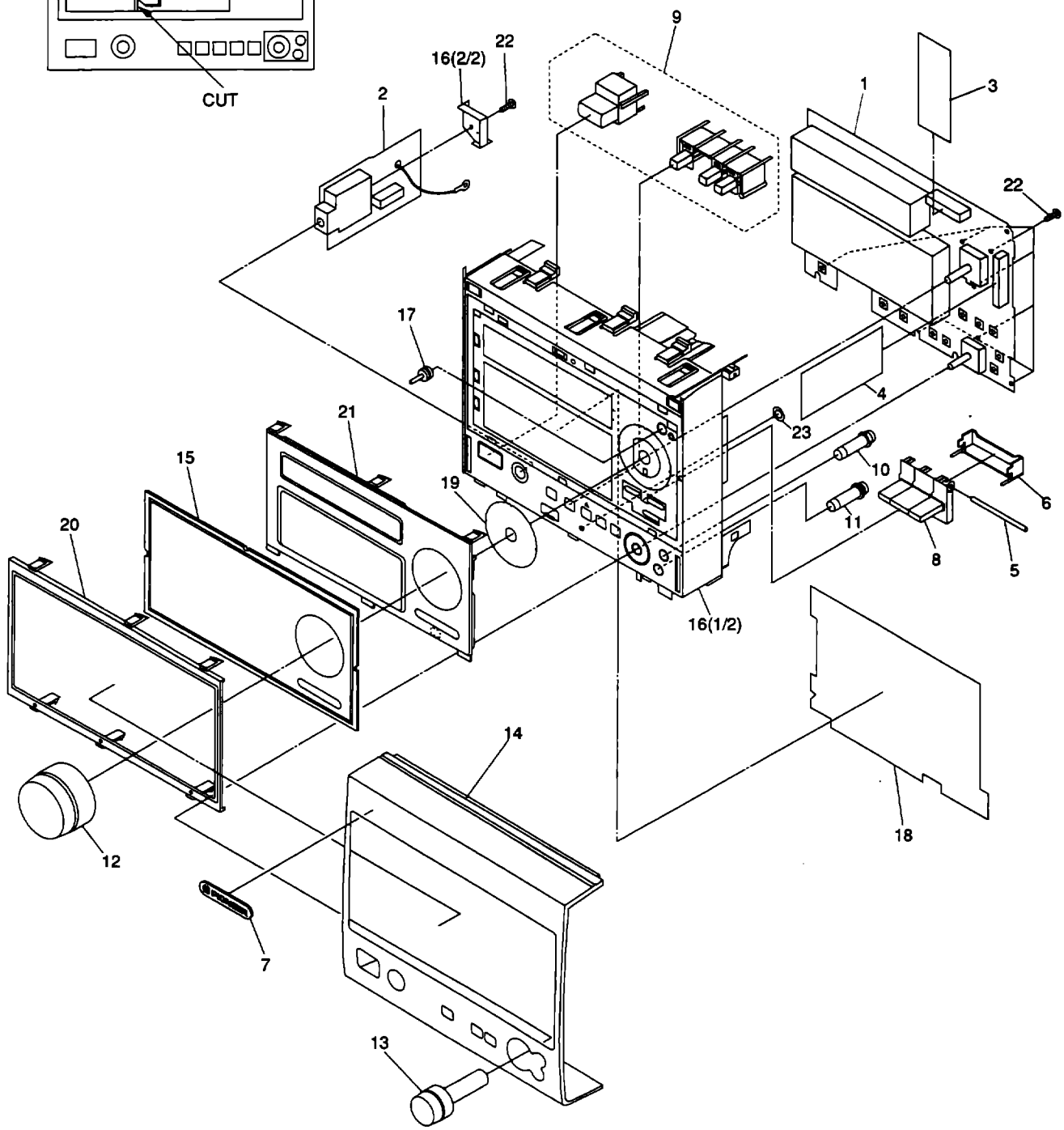
MY and NV types have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.		Remarks
			MY TYPE	NV TYPE	
⚠	11	AC Power Cord	PDG1003	PDG1055	
⚠	38	Fuse (T5A)	Not used	PEK1003	
	23	Rear Panel SX	RNA2140	RNA2141	
⚠	33	CN11 AC Outlet 1P	AKP1034	Not used	

2.3 FRONT PANEL SECTION

Note : Cutting Position
No.16 Panel Base SX





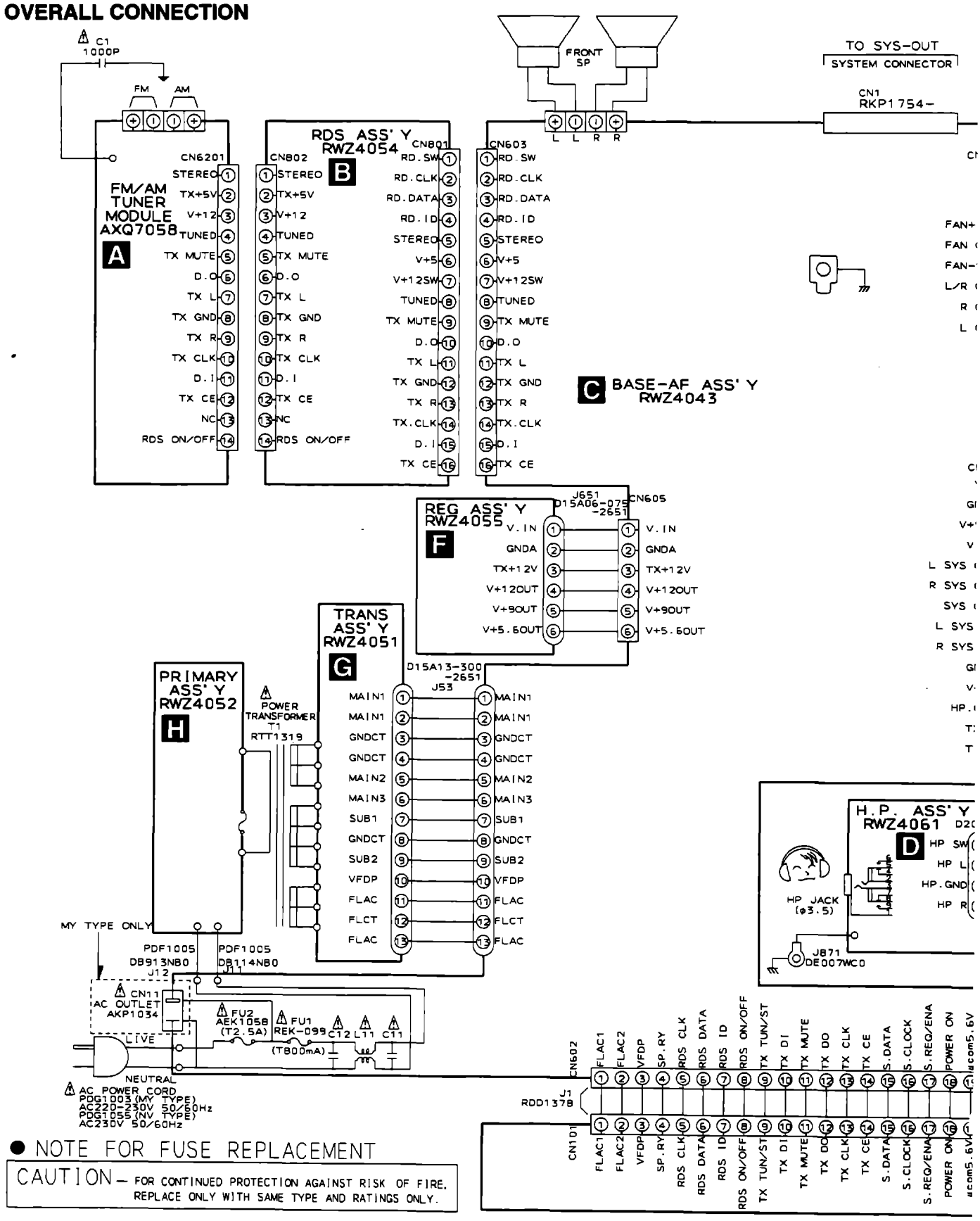
Parts List

Mark	No.	Description	Parts No.
NSP	1	SXDISP ASSY	RWM1973
	2	H.P. ASSY	RWZ4061
	3	J1 Lead Card 20P	RDD1378
	4	J2 Lead Card 24P	RDD1379
	5	Shaft	RLA1309
	6	Shaft Holder	RNK2264
	7	Name Plate	AAM1002
	8	Function Button A	RAC2136
	9	Function Button B	RAC2137
	10	MENU Button	RAC2138
	11	SET Button	RAC2139
	12	VOL Knob ASSY	RAC2140
	13	JOG Knob SX	RAC2141
	14	Front Panel SX	RAH2813
	15	Display Lens SX	RAH2761
	16	Panel Base SX	RAH2762
	17	Indicator Lens SX	RAH2763
	18	FL Filter SX	REC1282
	19	VOL Spacer	REC1295
	20	Disply Frame	RNK2228
	21	Display Panel	RNK2275
	22	Screw	BBZ30P080FMC
	23	Washer	VEC1254

3. SCHEMATIC DIAGRAM

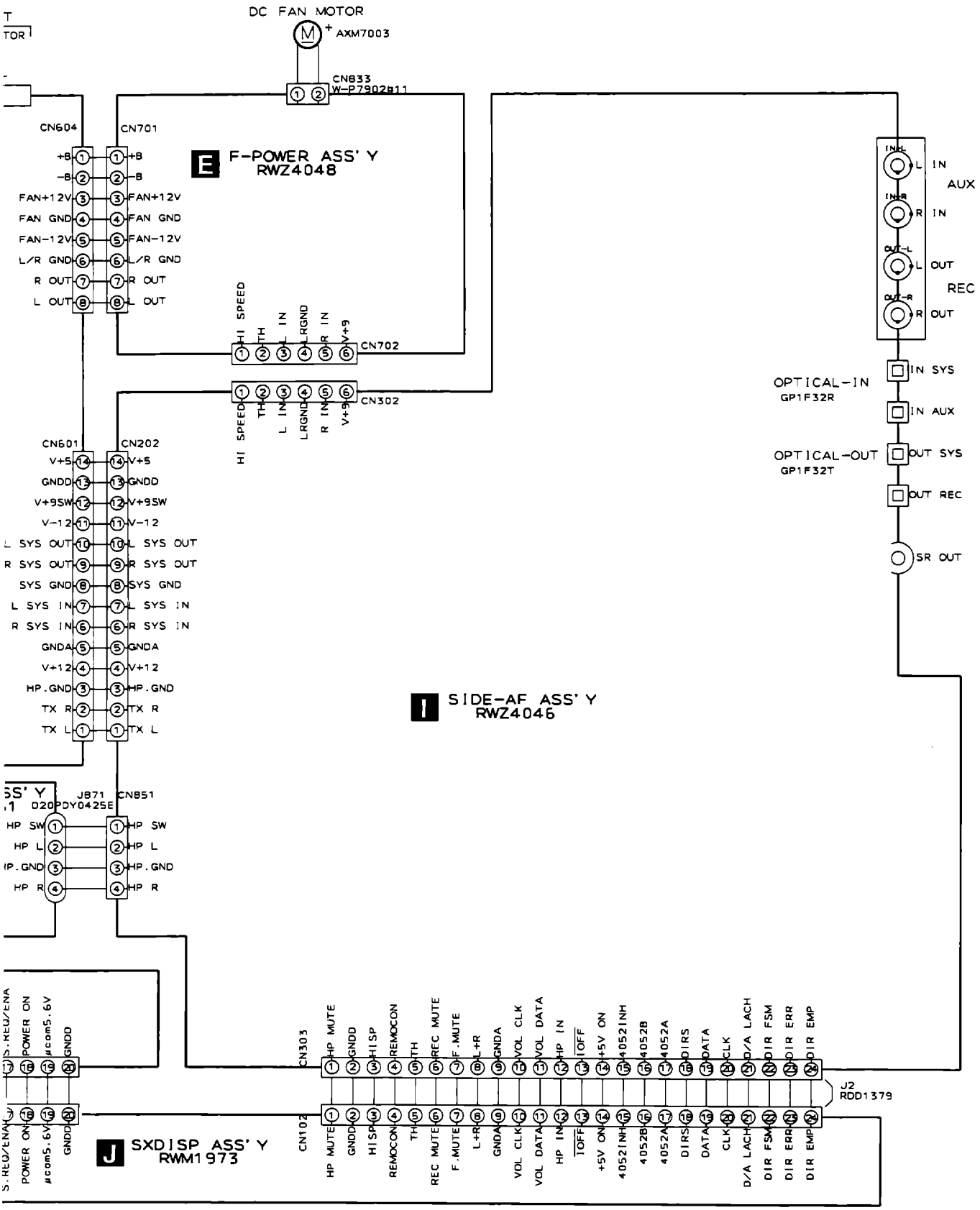
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST"

3.1 OVERALL CONNECTION

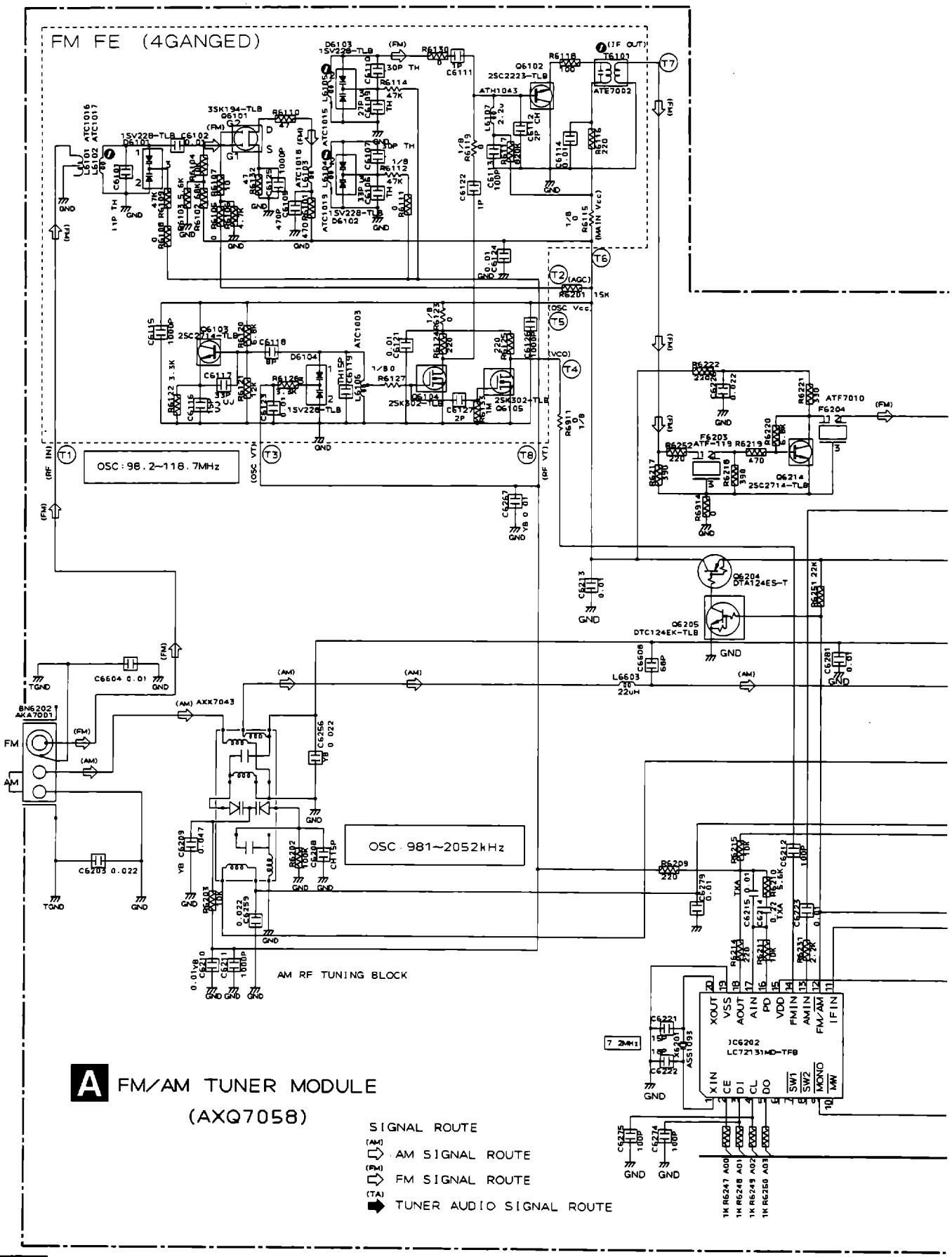


● NOTE FOR FUSE REPLACEMENT

CAUTION — FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

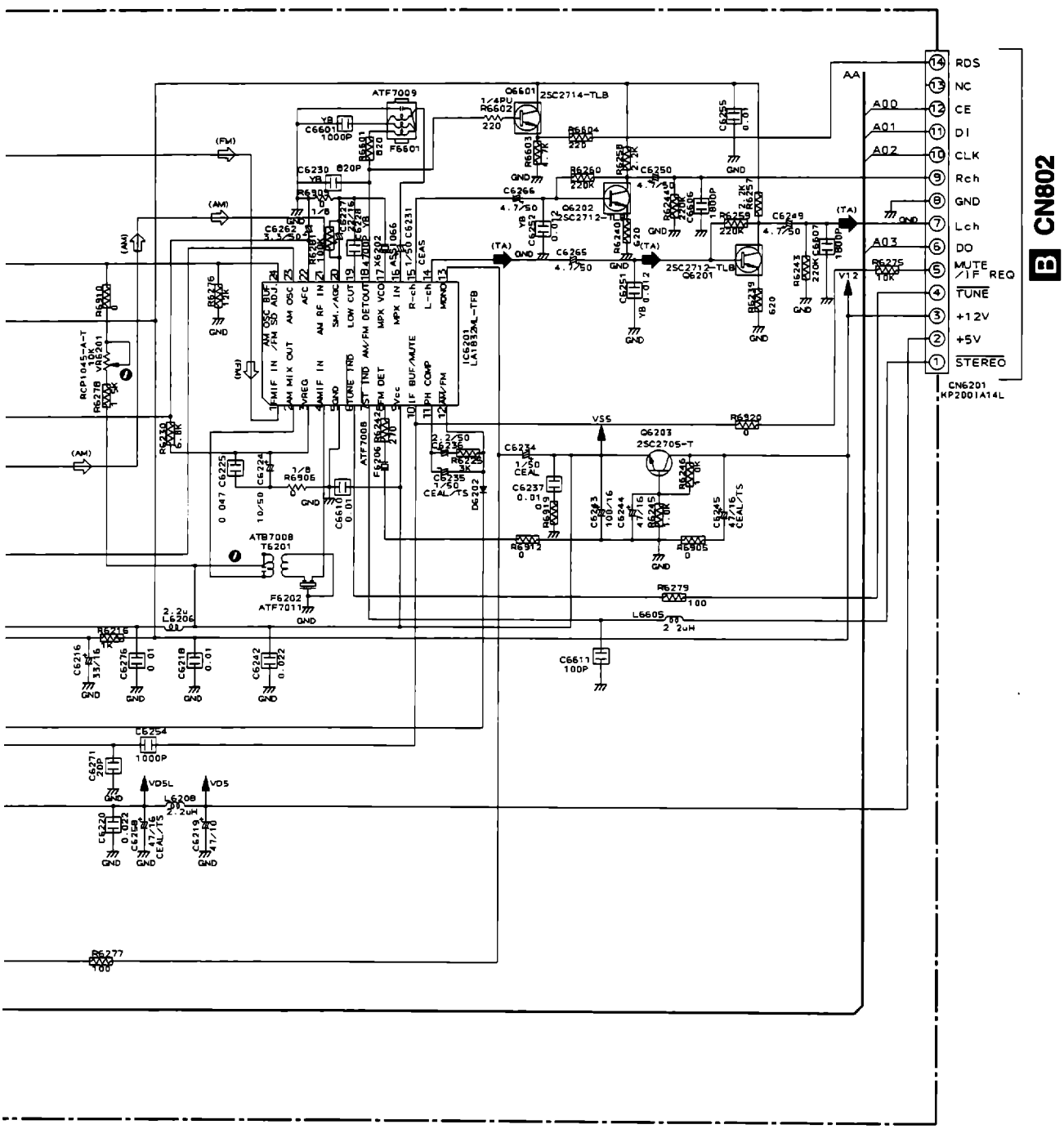

DC FAN MOTOR
AXM7003
CN833
W-P7902B11
CN604
CN701
+B
-B
FAN+12V
FAN GND
FAN-12V
L/R GND
R OUT
L OUT
E F-POWER ASS' Y
RWZ4048
HI SPEED
TH
L IN
LRGND
R IN
V+9
CN702
CN302
CN601
CN202
V+5
GNDD
V+9SW
V-12
L SYS OUT
R SYS OUT
SYS GND
L SYS IN
R SYS IN
GNDA
V+12
HP.GND
TX R
TX L
I SIDE-AF ASS' Y
RWZ4046
J871
D20PDY0425E
CN851
HP SW
HP L
HP R
IN L
IN R
AUX
OUT L
OUT R
REC
OPTICAL-IN
GP1F32R
OPTICAL-OUT
GP1F32T
IN SYS
IN AUX
OUT SYS
OUT REC
SR OUT
CN303
CN102
HP MUTE
GNDD
HISP
REMOCON
TH
REC MUTE
F.MUTE
L+R
GNDA
VOL CLK
VOL DATA
HP IN
TOFF
+5V ON
4052INH
4052B
4052A
DIRS
DATA
CLK
D/A LACH
DIR FSM
DIR ERR
DIR EMP
J2
RDD1379
POWER ON
µcom5.6V
J SXDISP ASS' Y
RWM1973

3.2 FM/AM TUNER MODULE

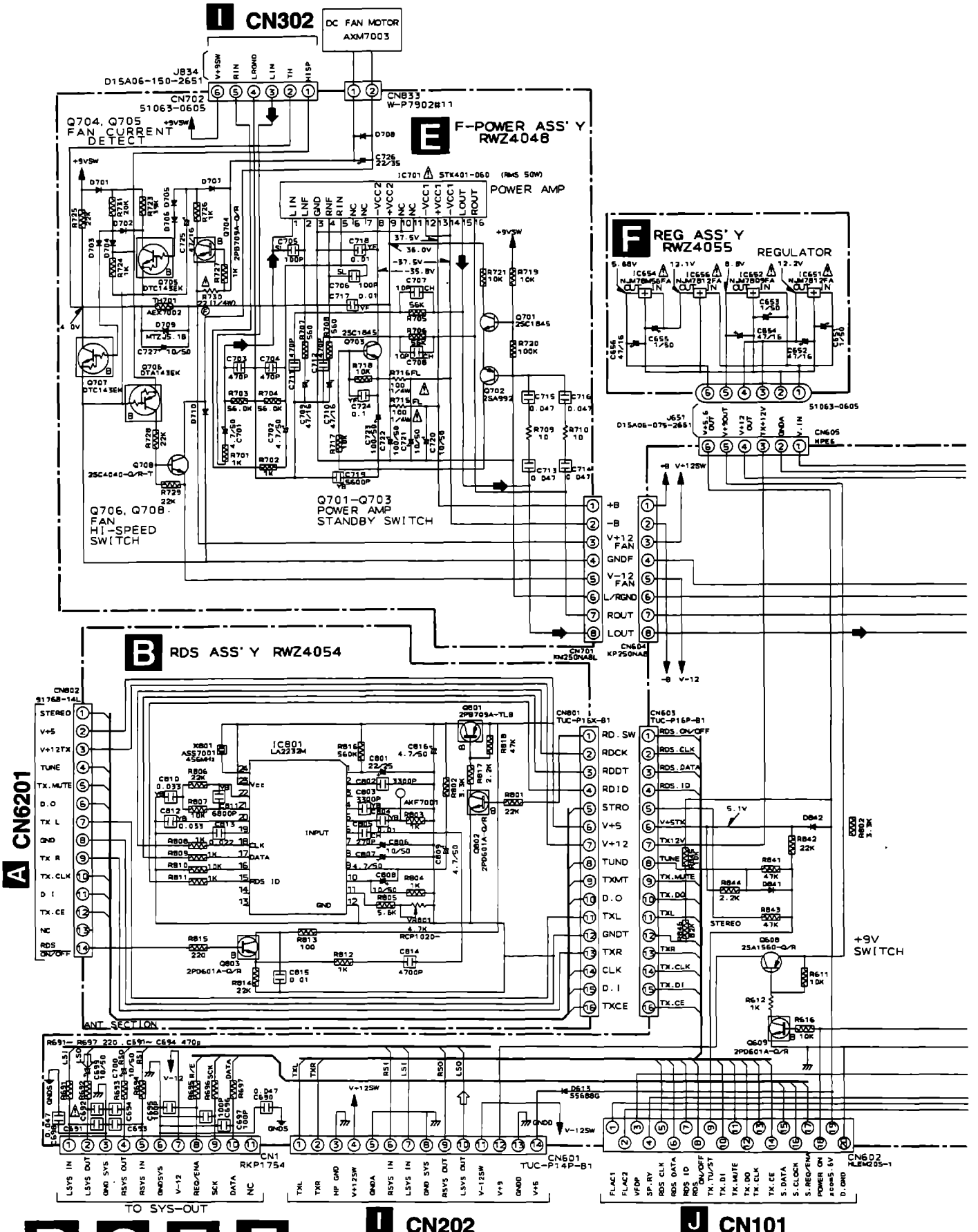


Notes

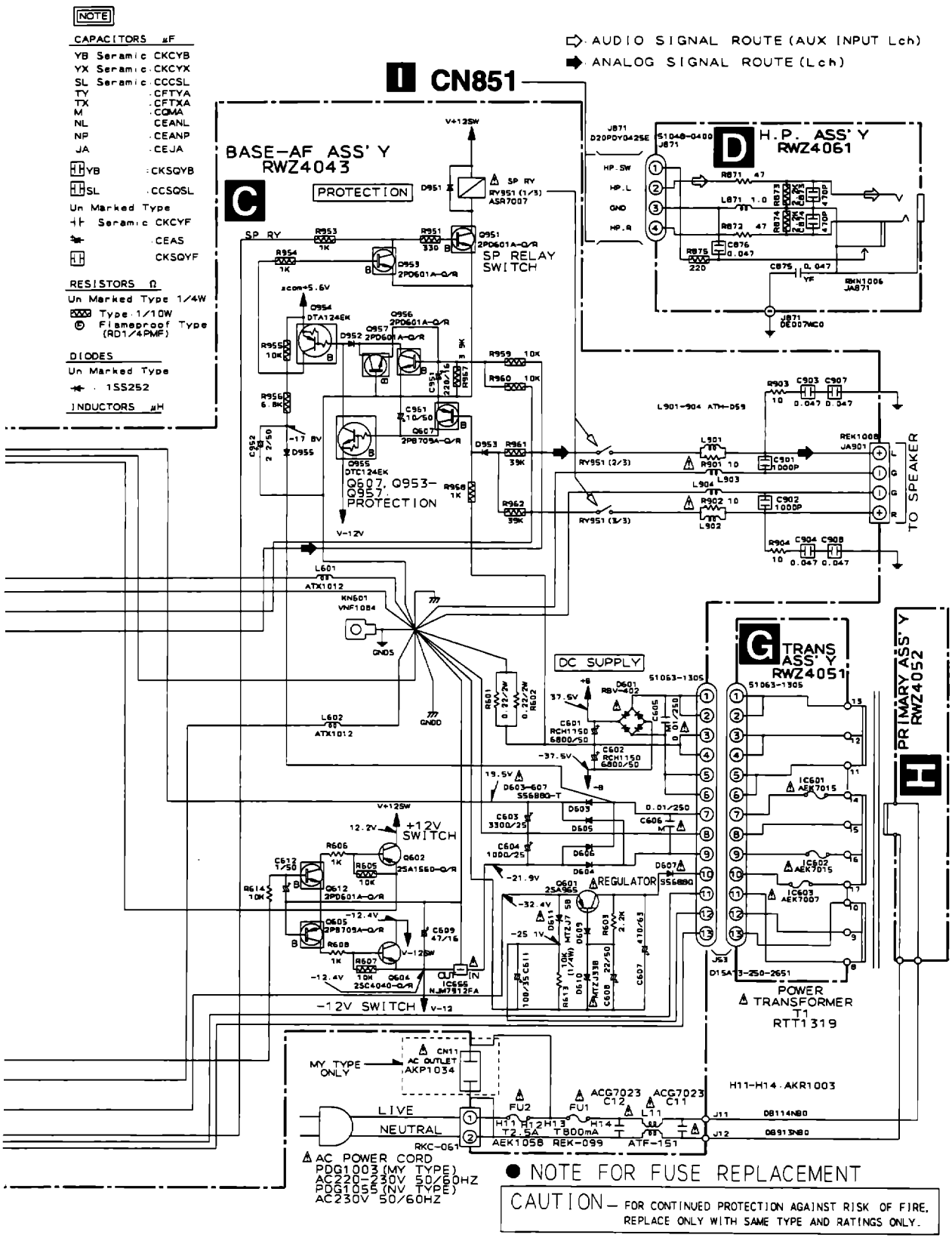
1. RESISTORS
   Indicated in Ω, 1/10W±5% Tolerance unless otherwise noted K:KΩ, M:MΩ.
2. CAPACITORS
   Indicated in Capacity(μF)/VOLTAGE(V) unless otherwise noted P:PF.
3. DIODES
   No mark diode is 1SS254.



3.3 RDS ASSY, BASE-AF ASSY, H.P.ASSY, F-POWER ASSY, REG ASSY, TRANS ASSY AND PRIMARY ASSY



B C E F

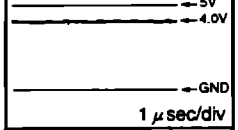

NOTE
CAPACITORS µF
YB Seramic CKCYB
YX Seramic CKCYX
SL Seramic CCCSL
TY CFTYA
TX CFTXA
M CQMA
NL CEANL
NP CEANP
JA CEJA
YB CKSQYB
SL CCSQSL
Un Marked Type
Seramic CKCYF
CEAS
CKSQYF
RESISTORS Ω
Un Marked Type 1/4W
Type 1/10W
Flameproof Type (RD1/4PMF)
DIODES
Un Marked Type
1SS252
INDUCTORS µH
AUDIO SIGNAL ROUTE (AUX INPUT Lch)
ANALOG SIGNAL ROUTE (Lch)
I CN851
BASE-AF ASS'Y RWZ4043
C
PROTECTION
SP RELAY SWITCH
H.P. ASS'Y RWZ4061
D
TO SPEAKER
DC SUPPLY
G TRANS ASS'Y RWZ4051
PRIMARY ASS'Y RWZ4052
H
+12V SWITCH
REGULATOR
-12V SWITCH
POWER TRANSFORMER T1 RTT1319
MY TYPE ONLY
AC OUTLET AKP1034
LIVE
NEUTRAL
AC POWER CORD
PDG1003 (MY TYPE)
AC220-230V 50/60HZ
PDG1055 (NV TYPE)
AC230V 50/60HZ
NOTE FOR FUSE REPLACEMENT
CAUTION— FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

3.4 SIDE-AF ASSY

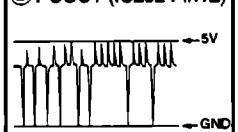
WAVEFORMS OF PARTS

The signal waveform shown below appears when optical signal is input. (fs=44.1kHz)

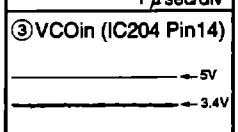
① PCVS (IC204 Pin11)



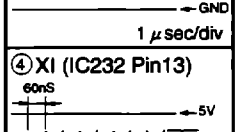
② PCOUT (IC232 Pin12)



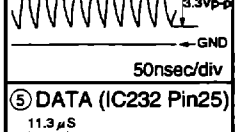
③ VCOin (IC204 Pin14)



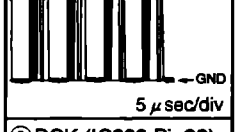
④ XI (IC232 Pin13)



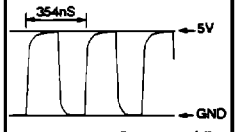
⑤ DATA (IC232 Pin25)

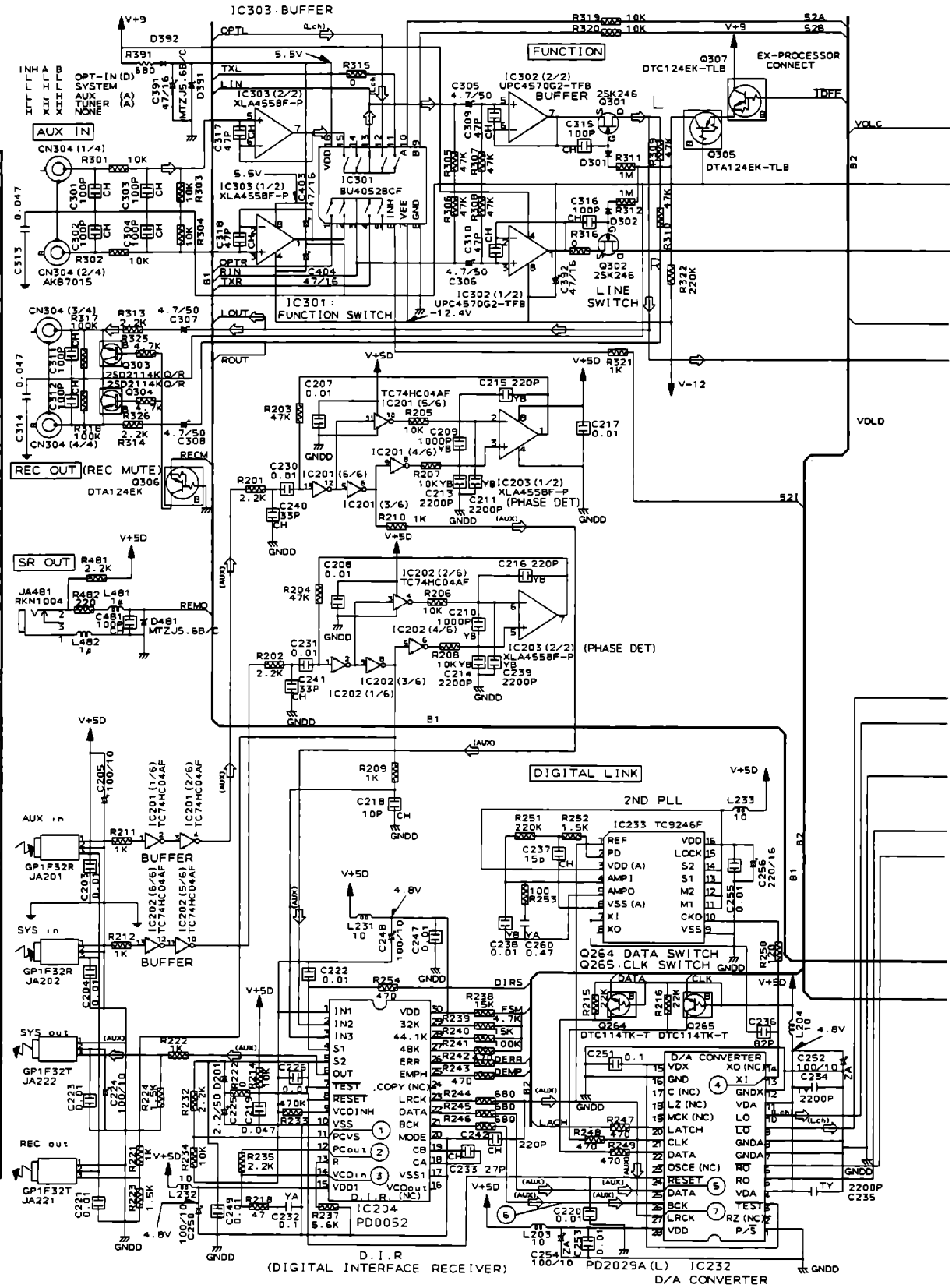


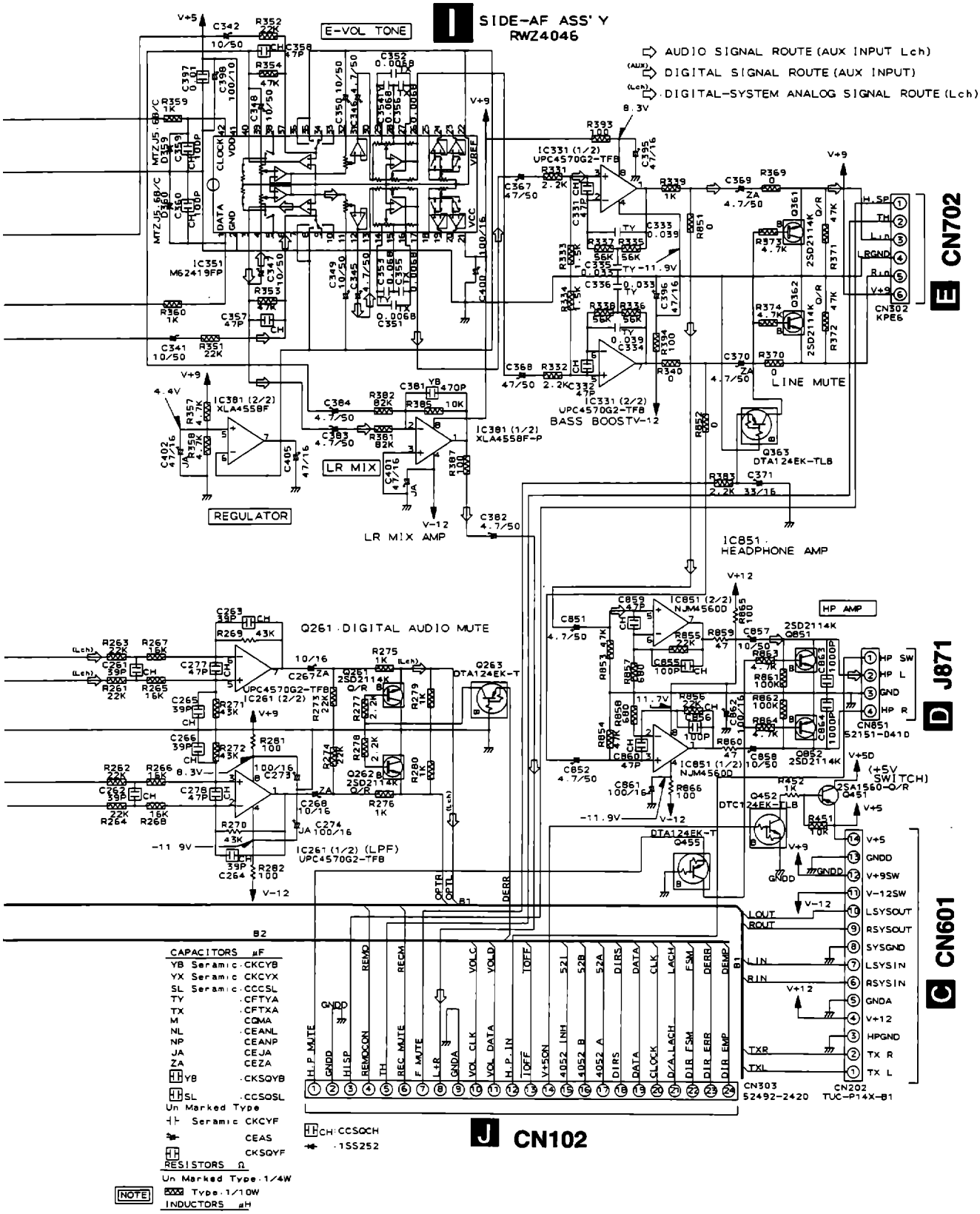
⑥ BCK (IC232 Pin26)



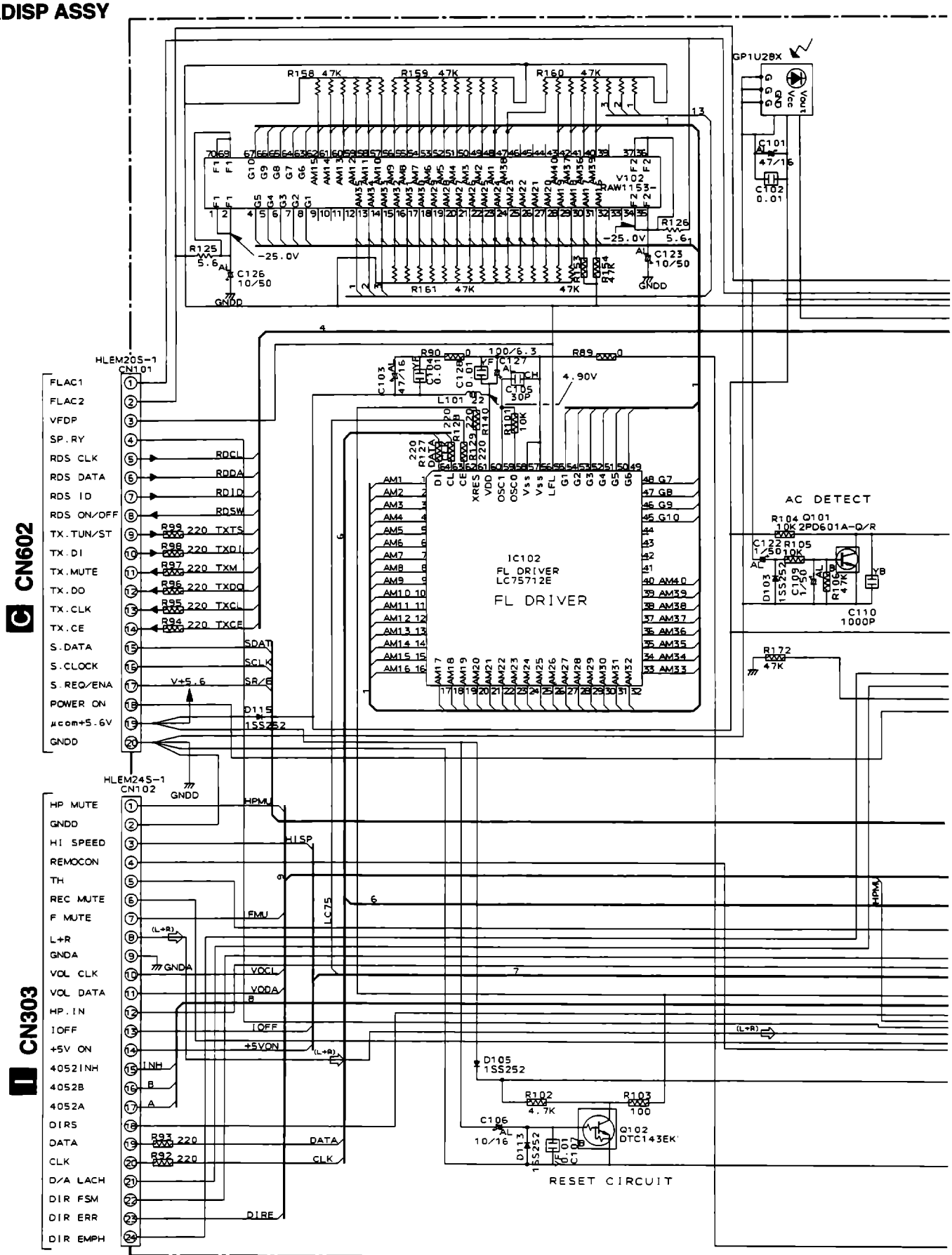
⑦ LRCK (IC232 Pin27)






I SIDE-AF ASS'Y
RWZ4046
AUDIO SIGNAL ROUTE (AUX INPUT Lch)
DIGITAL SIGNAL ROUTE (AUX INPUT)
DIGITAL-SYSTEM ANALOG SIGNAL ROUTE (Lch)
E-VOL TONE
IC351 M62419FP
IC331 (1/2) UPC4570G2-TFB
IC331 (2/2) UPC4570G2-TFB
BASS BOOST
LINE MUTE
Q363 DTA124EK-TLB
CN702
E
CN302 KPE6
REGULATOR
LR MIX
IC381 (2/2) XLA4558F
IC381 (1/2) XLA4558F-P
LR MIX AMP
IC851 HEADPHONE AMP
HP AMP
Q261 DIGITAL AUDIO MUTE
IC261 (2/2) UPC4570G2-TFB
IC261 (1/2) (LPF) UPC4570G2-TFB
IC851 (2/2) NJM4560D
IC851 (1/2) NJM4560D
Q455 DTA124EK-T
Q452 DTC124EK-TLB
Q451 2SA1560-O/R
(+5V SWITCH)
D
J871
CN851 52151-0410
C
CN601
CN303 52492-2420
CN202 TUC-P14X-B1
J
CN102
CAPACITORS µF
RESISTORS Ω
INDUCTORS µH
NOTE

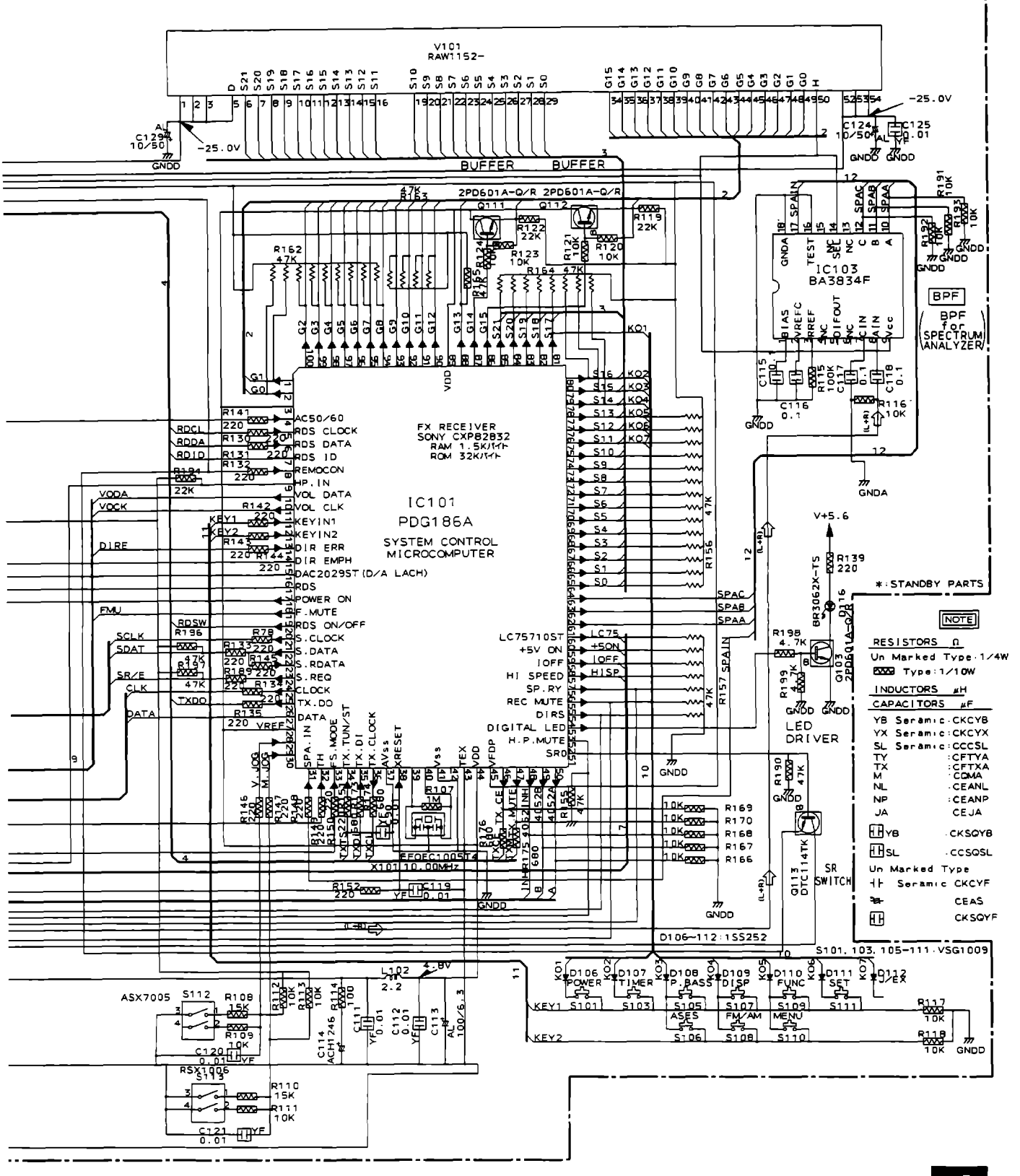
3.5 SXDISP ASSY



J SXDISP ASS' Y
RWM1973

SXDISP ASSY
S101 : POWER STANDBY/ON
S103 : TIMER
S105 : P.BASS
S106 : ASES
S107 : DISPLAY
S108 : FM/AM/STATION
S109 : FUNCTION
S110 : MENU
S111 : SET
S112 : VOLUME (DOWN/UP)
S113 : MULTI JOG (−/+)

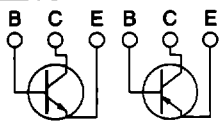
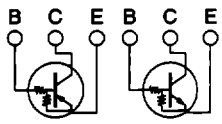
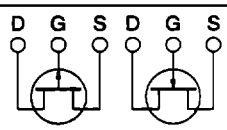
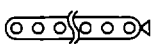
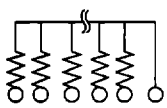
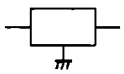
(L+R) ANALOG SIGNAL ROUTE (L+R)



4. PCB CONNECTION DIAGRAM

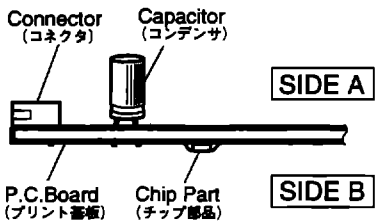
NOTE FOR PCB DIAGRAMS

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respecitve destinations, be sure to check with the schematic diagram.

4. Viewpoint of PCB diagrams



5. PCB PARTS LIST

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	→	*56 × 10¹*	→ *561*	*RD1/4PU561J*
47kΩ	→	*47 × 10³*	→ *473*	*RD1/4PU473J*
0.5Ω	→	*R50*		*RN2HR50*
1Ω	→	*1R0*		*RS1P1R0K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	→	*562 × 10¹*	→ *5621*	*RN1/4PC5621F*

Mark	No.	Description	Parts No.
LIST OF ASSEMBLIES			
		FM/AM TUNER MODULE	AXQ7058
NSP		SXMAIN ASSY	RWM1971
		├ BASE – AF ASSY	RWZ4043
		├ SIDE – AF ASSY	RWZ4046
		├ F – POWER ASSY	RWZ4048
		├ TRANS ASSY	RWZ4051
		├ PRIMARY ASSY	RWZ4052
		├ RDS ASSY	RWZ4054
		├ REG ASSY	RWZ4055
		└ H.P. ASSY	RWZ4061
NSP		SXDISP ASSY	RWM1973
A FM/AM TUNER MODULE			
SEMICONDUCTORS			
		IC6201	LA1832ML
		IC6202	LC72131MD
		Q6102	2SC2223
		Q6203	2SC2705
		Q6201, Q6202	2SC2712
		Q6103, Q6214, Q6601	2SC2714
		Q6104, Q6105	2SK302
		Q6101	3SK194
		Q6204	DTA124ES
		Q6205	DTC124EK
		D6202	1SS254
		D6101 – D6104	1SV228
COILS AND FILTERS			
		L6106	ATC1003
		L6105	ATC1015
		L6101	ATC1016
		L6102	ATC1017
		L6103	ATC1018
		L6104	ATC1019
		F6203	ATF – 119
		F6206	ATF7008
		F6601	ATF7009
		F6204	ATF7010
		F6202 (455kHz)	ATF7011
		L6107 (2.2µH)	ATH1043
		L6602, L6603	LAU220J
		L6206, L6208, L6605	LAU2R2J
TRANSFORMERS			
		T6201	ATB7008
		T6101	ATE7002
CAPACITORS			
		C6113, C6212, C6274, C6275, C6611	CCSQCH101J50
		C6116, C6208, C6221	CCSQCH150J50
		C6222	CCSQCH180J50
		C6271	CCSQCH200J50
		C6117	CCSQCH330J50
		C6608	CCSQCH680J50
		C6118	CCSQCH8R0D50
		C6111, C6122	CCSQCK1R0C50
		C6112, C6127	CCSQCK2R0C50
		C6105	CCSQSL471J50
		C6101	CCSQTH110J50
		C6119	CCSQTH150J50
		C6109	CCSQTH270J50
		C6107, C6110	CCSQTH300J50
		C6106	CCSQTH330J50
		C6234, C6235	CEAL1R0M50
		C6245	CEAL470M16
		C6224	CEAS100M50
		C6243	CEAS101M16
		C6231	CEAS1R0M50
		C6227	CEAS220M16
		C6236	CEAS2R2M50
		C6216	CEAS330M16
		C6262	CEAS3R3M50
		C6219	CEAS470M10
		C6244	CEAS470M16
		C6249, C6250, C6265, C6266	CEAS4R7M50
		C6258	CEJA470M16
		C6215	CFTXA103J50
		C6214	CFTXA224J50

Mark	No.	Description	Parts No.
	C6115, C6125, C6126, C6211, C6254		CKSQYB102K50
	C6601		CKSQYB102K50
	C6102, C6114, C6121, C6123, C6124		CKSQYB103K50
	C6210, C6213, C6237, C6267, C6276		CKSQYB103K50
	C6279, C6281, C6604		CKSQYB103K50
	C6251, C6252		CKSQYB123K50
	C6606, C6607		CKSQYB182K50
	C6203, C6259		CKSQYB223K50
	C6228		CKSQYB472K50
	C6209		CKSQYB473K50
	C6230		CKSQYB821K50
	C6218, C6223, C6255		CKSQYF103Z50
	C6220, C6226, C6242, C6256		CKSQYF223Z50
	C6225		CKSQYF473Z50
	C6610		CKSYB103K50
RESISTORS			
	R6602		RD1/4PU221J
	R6115, R6119, R6123, R6127, R6129		RS1/8S0R0J
	R6906, R6909, R6911		RS1/8S0R0J
	R6112		RS1/8S473J
	VR6201	(10kΩ/0.1W)	RCP1045
		Other Resistors	RS1/10S□□□J
OTHERS			
	BN6202	2P TERMINAL WITH PAL	AKA7001
	X6202	CRYSTAL RESONATOR(456kHz)	ASS1066
	X6201	CRYSTAL RESONATOR(7.2000MHz)	ASS1093
	CN6201	14P SOCKET	KP200IA14L

C BASE - AF ASSY

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
⚠	IC655		NJM7912FA
	Q605, Q607		2PB709A
	Q609, Q612, Q951, Q953		2PD601A
	Q956, Q957		2PD601A
	Q602, Q608		2SA1560
⚠	Q601		2SA965
	Q604		2SC4040
	Q954		DTA124EK
	Q955		DTC124EK
	D609, D841, D842, D951 – D953		1SS252
	D955		1SS252
	D610		MTZJ33B
	D611		MTZJ7.5B
⚠	D601		RBV – 402
⚠	D603 – D607		S5688G
	D613		S5688G
COILS AND FILTERS			
⚠	L11	(0.8mH/AC250V)	ATF – 151
	L901 – L904	(5.3μH)	ATH – 059
⚠	L601		ATX1012
	L602		ATX1012
SWITCHES AND RELAYS			
⚠	RY951	(12V)	ASR7007
CAPACITORS			
⚠	C11, C12	(10000pF/AC250V)	ACG7023
	C695 – C697		CCSQSL101J50
	C699, C700, C961		CEAS100M50
	C611		CEAS101M35
	C604		CEAS102M25
	C612		CEAS1R0M50
	C608		CEAS220M50
	C951		CEAS221M16
	C952		CEAS2R2M50
	C603		CEAS332M25
	C609		CEAS470M16
	C607		CEAS471M63
	C901, C902		CKSQYB102K50
	C691 – C694		CKSQYB471K50
	C690, C698, C903, C904		CKSQYF473Z50
	C907, C908		CKSQYF473Z50
⚠	C605, C606		CQMA103K2E
	C601, C602	(6800pF/50V)	RCH1150
RESISTORS			
⚠	R901, R902		RD1/4LMF100J
	R903, R904		RD1/4PU100J
	R606, R608, R612		RD1/4PU102J
	R613, R614		RD1/4PU103J
	R603		RD1/4PU222J
	R601, R602		RS2LMFR22J
		Other Resistors	RS1/10S□□□J
OTHERS			
		CABLE HOLDER(13P)	51063 – 1305
	H11 – H14	FUSE CLIP	AKR1003
	CN602	CONNECTOR 20P	HLEM20S – 1
	CN604	8P SOCKET	KP250NA8
	CN605	CONNECTOR(6P)	KPE6
		TERMINAL	RKC – 061
	JA901	SPEAKER TERMINAL 4 – P	RKE1008
	CN1	SOCKET(11P)	RKP1754
	CN601	CONNECTOR(14P)	TUC – P14P – B1
	CN603	CONNECTOR(16P)	TUC – P16P – B1
	KN601	EARTH METAL FITTING	VNF1084

I SIDE - AF ASSY

No.	Description	Parts No.
SEMICONDUCTORS		
IC301		BU4052BCF
IC351		M62419FP
IC851		NJM4560D
IC204		PD0052
IC232		PD2029A(L)
IC201, IC202		TC74HC04AF
IC233		TC9246F
IC261, IC302, IC331		UPC4570G2
IC203, IC303, IC381		XLA4558F – P
Q451		2SA1560
Q261, Q262, Q303, Q304		2SD2114K
Q361, Q362, Q851, Q852		2SD2114K
Q301, Q302		2SK246
Q263, Q305, Q306, Q363, Q455		DTA124EK
Q264, Q265		DTC114TK
Q307, Q452		DTC124EK
D201, D301, D302, D392		1SS252
D359, D360, D391, D481		MTZJ5.6B/C

Mark	No.	Description	Parts No.
COILS AND FILTERS			
	L203, L204, L231 – L233		LAU100J
	L481, L482		LAU1R0J
CAPACITORS			
	C218		CCSQCH100D50
	C301 – C304, C311, C312		CCSQCH101J50
	C315, C316, C359, C360, C481		CCSQCH101J50
	C855, C856		CCSQCH101J50
	C237		CCSQCH150J50
	C242		CCSQCH221J50
	C233		CCSQCH270J50
	C240, C241		CCSQCH330J50
	C261 – C266		CCSQCH390J50
	C277, C278, C309, C310		CCSQCH470J50
	C317, C318, C331, C332		CCSQCH470J50
	C357, C358, C859, C860		CCSQCH470J50
	C236		CCSQCH820J50
	C342, C347 – C350, C857, C858		CEAS100M50
	C205, C224, C248, C250, C398		CEAS101M10
	C273, C400, C861, C862		CEAS101M16
	C256		CEAS221M16
	C225		CEAS2R2M50
	C371		CEAS330M16
	C391, C392, C395, C396		CEAS470M16
	C403 – C405		CEAS470M16
	C367, C368		CEAS470M25
	C305 – C308, C345, C346		CEAS4R7M50
	C382 – C384, C851, C852		CEAS4R7M50
	C341		CEJA100M50
	C274		CEJA101M16
	C401, C402		CEJA470M16
	C267, C268, C369, C370		CEZA100M50
	C252, C254		CEZA101M10
	C232		CFTYA104J50
	C335, C336		CFTYA333J50
	C333, C334		CFTYA393J50
	C260		CFTYA474J50
	C353, C354		CFTYA683J50
	C313, C314		CKCYF473Z50
	C209, C210, C863, C864		CKSQYB102K50
	C238		CKSQYB103K50
	C215, C216		CKSQYB221K50
	C211, C213, C214, C239		CKSQYB222K50
	C381		CKSQYB471K50
	C203, C204, C207, C208, C217		CKSQYF103Z50
	C220 – C223, C226, C230, C231		CKSQYF103Z50
	C247, C249, C253, C255, C397		CKSQYF103Z50
	C251		CKSQYF104Z25
	C219		CKSQYF473Z50
	C234, C235		CQMZA222J50
	C351, C352, C355, C356		CQMZA682J50
RESISTORS			
	R281, R282, R865, R866		RD1/4PU101J
	R452		RD1/4PU102J
	R269, R270		RD1/4PU433J
	R859, R860		RD1/4PU470J
	R391		RD1/4PU681J
		Other Resistors	RS1/10S□□□J

Mark	No.	Description	Parts No.
OTHERS			
	CN851	3PJUMPER CONNECTOR	52151 – 0410
	CN303	CONNECTOR 24P	52492 – 2420
	CN304	PIN JACK(4P)	AKB7015
	JA201, JA202	OPTICAL LINK IN	GP1F32R
	JA221, JA222	OPTICAL LINK OUT	GP1F32T
	CN302	CONNECTOR(6P)	KPE6
	JA481	JACK	RKN1004
	CN202	CONNECTOR(14P)	TUC – P14X – B1

E F - POWER ASSY

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
⚠	IC701		STK401 – 060
	Q704		2PB709A
	Q702		2SA992
	Q701, Q703		2SC1845
	Q708		2SC4040
	Q706		DTA143EK
	Q705, Q707		DTC143EK
	D701 – D708		1SS252
	D710		1SS254
	D709		MTZJ5.1B
	TH701		AEX7002
CAPACITORS			
	C707, C708		CCSQCH100D50
	C705, C706		CCSQSL101J50
	C720, C721, C727		CEAS100M50
	C722, C723		CEAS101M50
	C726		CEAS220M35
	C709, C710, C725		CEAS470M16
	C701, C702		CEAS4R7M50
	C703, C704, C711, C712		CKSQYB471K50
	C719		CKSQYB562K50
	C717, C718		CKSQYF103Z50
	C724		CKSQYF104Z50
	C713 – C716		CKSQYF473Z50
RESISTORS			
⚠	R715, R716		RD1/4LMF101J
	R709, R710		RD1/4PU100J
⚠	R730		RFA1/4PL220J
		Other Resistors	RS1/10S□□□J
OTHERS			
		CABLE HOLDER(6P)	51063 – 0605
	CN701	8P PLUG	KM250NA8L
	CN833	UP CONNECTOR	W – P7902#11

G TRANS ASSY

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
⚠	IC603	(750mA/125V)	AEK7007
⚠	IC601, IC602	(3A/125V)	AEK7015
OTHERS			
		CABLE HOLDER(13P)	51063 – 1305

Mark	No.	Description	Parts No.

H PRIMARY ASSY

OTHERS

	J11	LEAD WIRE UNIT	DB114NB0
	J12	LEAD WIRE UNIT	DB913NB0
		PCB BINDER	VEF1008

B RDS ASSY

SEMICONDUCTORS

	IC801	LA2232M
	Q801	2PB709A
	Q802, Q803	2PD601A

CAPACITORS

	C805	CCSQCH271J50
	C806, C808	CEAS100M50
	C801	CEAS220M25
	C807, C809, C816	CEAS4R7M50
	C804	CKSQYB103K50
	C813	CKSQYB223K50
	C802, C803	CKSQYB332K50
	C810, C812	CKSQYB333K50
	C814	CKSQYB472K50
	C811	CKSQYB682K50
	C815	CKSQYF103Z50

RESISTORS

	VR801	(4.7kΩ/0.1W)	RCP1020
		Other Resistors	RS1/10S□□□J

OTHERS

	CN802	CONNECTOR(14P)	9176B – 14L
	X801	CERAMIC RESONATOR(456kHz)	ASS7001
	CN801	CONNECTOR(16P)	TUC – P16X – B1

F REG ASSY

SEMICONDUCTORS

⚠	IC652		NJM7809FA
⚠	IC651, IC656		NJM7812FA
⚠	IC654		NJM78M56FA

CAPACITORS

	C651, C653, C655	CEAS1R0M50
	C652, C654, C656	CEAS470M16

OTHERS

		CABLE HOLDER(6P)	51063 – 0605

D H.P. ASSY

COILS AND FILTERS

	L871	LAU1R0J

CAPACITORS

	C875	CKCYF473Z50
	C873, C874	CKSQYB471K50
	C876	CKSQYF473Z50

RESISTORS

	R871, R872		RD1/4PU470J
		Other Resistors	RS1/10S□□□J

Mark	No.	Description	Parts No.

OTHERS

		CABLE HOLDER(4P)	51048 – 0400
	JA871	HEADPHONE JACK	RKN1006

J SXDISP ASSY

SEMICONDUCTORS

	IC103	BA3834F
	IC102	LC75712E
	IC101	PDG186A
	Q101, Q103, Q111, Q112	2PD601A
	Q113	DTC114TK
	Q102	DTC143EK
	D103, D105 – D113, D115	1SS252
	D116	BR3062X

COILS AND FILTERS

	L101	LAU220J
	L102	LAU2R2J

SWITCHES AND RELAYS

	S112	ASX7005
	S113	RSX1006
	S101, S103, S105 – S111	VSG1009

CAPACITORS

	C114	ACH1246
	C105	CCSQCH300J50
	C106	CEAL100M16
	C123, C124, C126, C129	CEAL100M50
	C113, C127	CEAL101M6R3
	C109, C122	CEAL1R0M50
	C101, C103	CEAL470M16
	C110	CKSQYB102K50
	C102, C104, C107, C111, C112	CKSQYF103Z50
	C119 – C121, C125, C128, C90	CKSQYF103Z50
	C115 – C118	CKSQYF104Z50

RESISTORS

	R156		RA14T473J
	R161		RA15T473J
	R163		RA4T473J
	R158		RA6T473J
	R157		RA7T473J
	R160, R164		RA8T473J
	R159, R162		RA9T473J
	R125, R126		RD1/4PU5R6J
		Other Resistors	RS1/10S□□□J

OTHERS

	X101	CERAMIC RESONATOR	EFOEC1005T4
		REMOTE RECEIVER UNIT	GP1U28X
	CN101	CONNECTOR 20P	HLEM20S – 1
	CN102	CONNECTOR	HLEM24S – 1
	V101	FL TUBE	RAW1152
	V102	FL TUBE	RAW1153
		SPACER T10(CR)	REB1305
		SPACER T7(CR)	REB1306

6. ADJUSTMENT

6.1 TUNER SECTION

■ FM Tuner Section

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1–1.

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Front End Sensitivity	106	0-30	106MHz	L6104 L6105 L6102 T6101	Adjust so that the DC voltage between the IC6201-Pin 20 becomes at maximum level.
2	Stereo Distortion	98 (ON STEREO)	80	98MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
3	TUNED IND. Lighting Level	98	18±2	98MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

Notes:

- *Before adjusting, make sure there is no gap between L6101 and L6102 as well as between L6103 and L6104. If there is a gap between them, bring them into contact with each other first, and then make adjustments.*

■ AM Tuner Section

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1–1.

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	Front End Sensitivity	999*1	35-45	999kHz*1	T6201	Adjust so that the DC voltage between the IC6201-Pin 20 becomes at maximum level.

*1: For the area using 10kHz step, frequencies should be 1000kHz

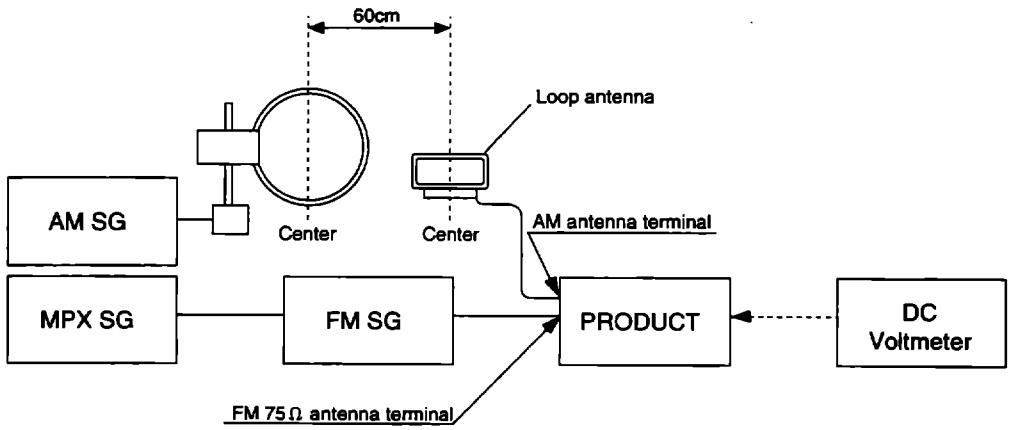


Fig. 1–1 AM and FM Adjustment Wiring Diagram

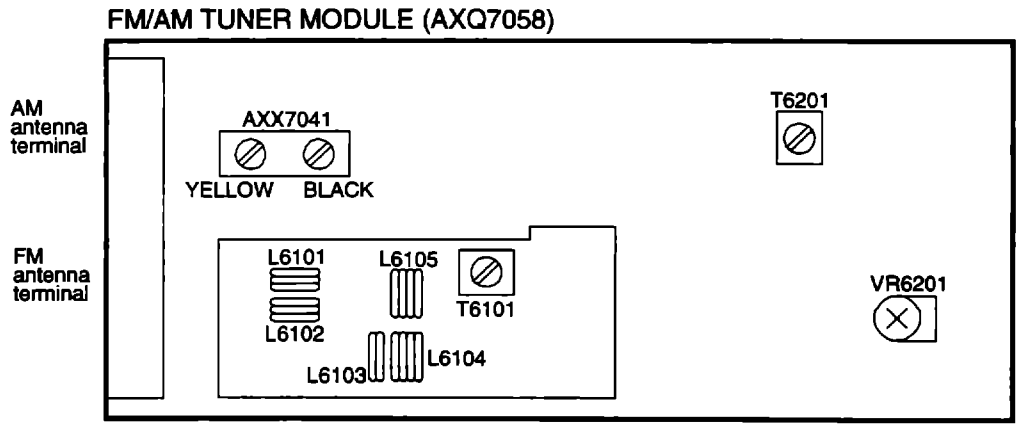


Fig. 1-2 Adjustment Points

7. GENERAL INFORMATION

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

7.1 PARTS

7.1.1 IC

■ PDG186A (IC101 : SXDISP ASSY)

● SYSTEM CONTROL MICROCOMPUTER

● Pin Function

No.	Name	Pin Function	I/O	Function
1	G1/A1	G1	O	FDP control grid.
2	G0/A0	G0	O	
3	NC	NC	O	H
4	PE0/EC0/INT0	AC50/60	I	AC pulse input.(for the clock and monitoring of the power source)
5	PE1/EC1/INT1	RDS CLOCK	I	RDS serial clock input.
6	PE2/INT2	RDS DATA	I	RDS serial data input.
7	PE3/INT3/NMI	RDS ID	I	RDS ID input.
8	PE4/RMC	REMOCON	I	Remote control signal input.
9	PE5	H.P.IN	I	Headphone connection detect. H : No detect L : Detect (audio mute)
10	PE6/PWM	VOL DATA	O	VOLUME IC M62419FP Serial data.
11	PE7/T0/ADJ	VOL CLK	O	VOLUME IC M62419FP Serial clock.
12	PC0/KR0	KEYIN1	I	Key scan return input.
13	PC1/KR1	KEYIN2	I	
14	PC2/KR2	DIR ERR	I	Digital lock detect. L : Digital lock H : Unlock
15	PC3/KR3	DIR EMPH	I	Emphasis information detect. H : Emphasis L : No emphasis
16	PC4/KR4	DAC2029ST	O	DAC IC PD2029 strobe.
17	PC5/KR5	RDS	I	Detection of existence of RDS. L : RDS H : None
18	PC6/KR6	POWER ON	O	POWER ON/OFF control. H : POWER ON L : POWER OFF
19	PC7/KR7	F.MUTE	O	FRONT mute control. H : MUTE L : -
20	PB0/CINT	RDS ON/OFF	O	RDS ON/OFF control. H : ON L : OFF
21	PB1/CS0	S.CLOCK	O	System bus serial clock output.
22	PB2/SCK0	S.DATA	O	System bus serial data output.
23	PB3/SI0	S.RDATA	I	System bus serial data input.
24	PB4/SO0	S.REQ	I/O	System bus request input/output.
25	PB5/SCK1	CLOCK	O	Serial clock output for controlling ICs. (FL DRIVER LC75712, DAC PD2029, DIR PD0052)
26	PB6/SCI	TX.D0	O	PLL IC LC72131M serial data output.
27	PB7/SO1	DATA	O	Serial clock output for controlling ICs. (FL DRIVER LC75712, DAC PD2029, DIR PD0052)
28	AVref	+5V	I	AD reference voltage input.
29	PA0/AN0	V.JOG	I	Pulse input for VOLUME JOG (ADC)
30	PA1/AN1	M.JOG	I	Pulse input for MULTI JOG (ADC)
31	PA2/AN2	SPA.IN	I	Spectrum analyzer data input. (ADC)
32	PA3/AN3	TH	I	FAN error data input. (ADC)
33	PA4/AN4	FS.MODE	I	Sampling frequency data input. (ADC)
34	PA5/AN5	TX.TUN/STO	I	TUNE/STEREO data input. (ADC)
35	PA6/AN6	TX.DI	I	PLL IC LC72131M serial data input.
36	PA7/AN7	TX.CLOCK	O	PLL IC LC72131M serial clock output.
37	AVss	D.GND	-	D.GND
38	RST	XRESET	I	CPU RESET input. L : RESET H : -
39	EXTAL	OSC	I	10MHz ceramic oscillator connect.
40	XTAL	OSC	O	
41	Vss	D.GND	-	D.GND
42	TX	NC	O	-
43	TEX	D.GND	I	D.GND
44	V_{DD}	+5V	-	
45	Vfdp	-30V	-	

PDG186A

No.	Name	Pin Function	I/O	Function
46	PD0/A55	TX.CE	I	PLL IC LC72131M chip enable output.
47	PD1/A54	TX.MUTE	I	LA1832 IF BUFF control. H : IF count start L : -
48	PD2/A53	4052 INH	O	AUDIO SELECTOR control.
49	PD3/A52	4052 B	O	
50	PD4/A51	4052 A	O	
50	PD4/A50	SRO	O	Remote control external output control. H : Remote control through L : cut
52	PD6/A49	H.P.MUTE	O	Headphone mute control. H : MUTE L : -
53	PD7/A48	DIGITAL LED	O	DIGITAL LED control. H : Lights up L : Goes off
54	PF0/A47	DIRS	O	DIR output control. H : System A.AUX L : TUNER D.AUX POWER OFF
55	PF1/A46	REC MUTE	O	REC mute control. H : MUTE L : -
56	PF2/A45	SP.RY	O	Speaker relay control. H : Relay ON L : Relay OFF
57	PF3/A44	HI SPEED	O	FAN rotation control. H : High speed L : Low speed
58	PF4/A43	IOFF	O	Processor connection control. L : With H : Without
59	PF5/A42	D+5V ON	O	DIGITAL +5V ON/OFF control. H : ON L : OFF
60	PF6/A41	LC75710ST	O	FL DRIVER IC LC75712 strove.
61	PF7/A40	SPA A	O	Spectrum analyzer IC BA3834F control.
62	PG0/A39	SPA B	O	
63	PG1/A38	SPA C	O	
64	PG2/A37	S0	O	FDP control anode.
65	PG3/A36	S1	O	
66	PG4/A35	S2	O	
67	PG5/A34	S3	O	
68	PG6/A33	S4	O	
69	PG7/A32	S5	O	
70	PH0/A31	S6	O	
71	PH1/A30	S7	O	
72	PH2/A29	S8	O	
73	PH3/A28	S9	O	
74	PH4/A27	S10	O	
75	PH5/A26	S11	O	
76	PH6/A25	S12	O	
77	PH7/A24	S13	O	
78	A23	S14	O	
79	A22	S15	O	
80	A21	S16	O	
81	A20	S17	O	
82	A19	S18	O	
83	A18	S19	O	
84	A17	S20	O	
85	A16	S21	O	
86	G15/A15	G15	O	FDP control grid.
87	G14/A14	G14	O	
88	G13/A13	G13	O	
89	V_{DD}	+5V	-	
90	G12/A12	G12	O	FDP control grid.
91	G11/A11	G11	O	
92	G10/A10	G10	O	
93	G9/A9	G9	O	
94	G8/A8	G8	O	
95	G7/A7	G7	O	
96	G6/A6	G6	O	
97	G5/A5	G5	O	
98	G4/A4	G4	O	
99	G3/A3	G3	O	
100	G2/A2	G2	O	

AUDIO SELECTOR control.

	OPT IN	AUX	SYSTEM	TUNER
4052 A	L	L	H	H
4052 B	L	H	L	H
4052 INH	L	L	L	L

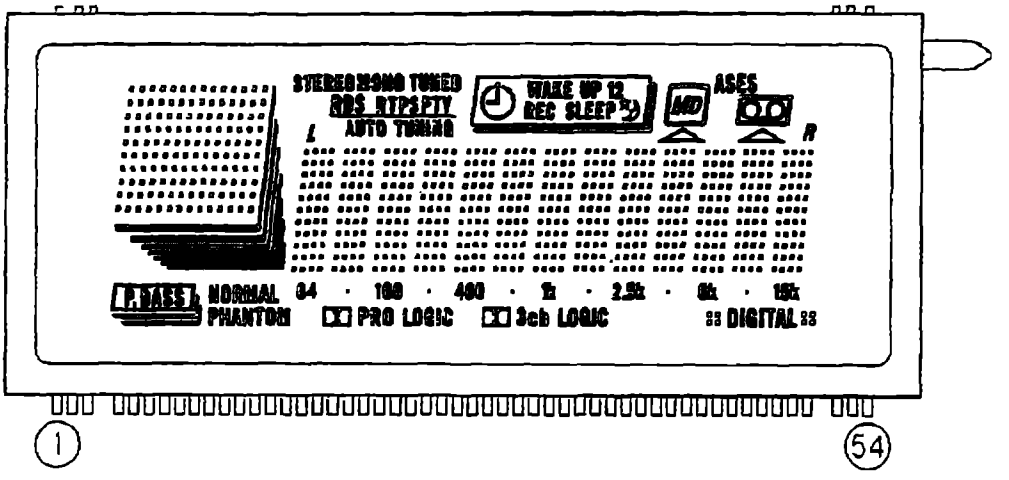
H : MUTE

7.1.2 DISPLAY

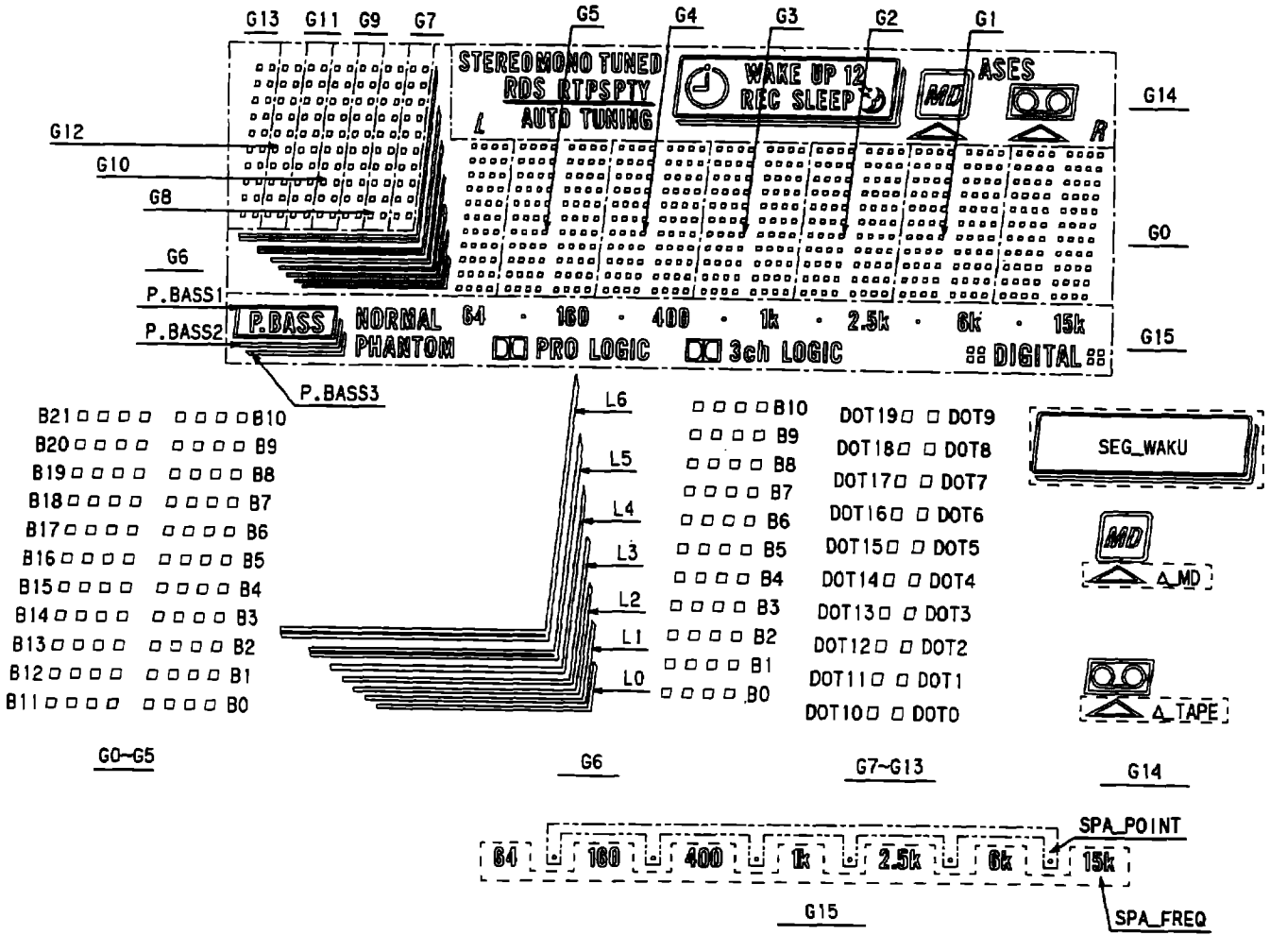
■ RAW1152 (V101 : SXDISP ASSY)

● FL TUBE

● Pin Assignment



● Grid Assignment



● Anode Connection

	G0~G5	G6	G7~G13	G14	G15
S0	B0	B0	DOT0		P.BASS
S1	B1	B1	DOT1	2	P.BASS1
S2	B2	B2	DOT2	WAKE UP	P.BASS2
S3	B3	B3	DOT3		P.BASS3
S4	B4	B4	DOT4	PTY	NORMAL
S5	B5	B5	DOT5	RT	PHANTOM
S6	B6	B6	DOT6	RDS	PRO LOGIC
S7	B7	B7	DOT7	AUTO TUNING	3ch LOGIC
S8	B8	B8	DOT8	MONO	DIGITAL
S9	B9	B9	DOT9	STEREO	DIGITAL
S10	B10	B10	DOT10	ASES	SPA_FREQ

	G0~G5	G6	G7~G13	G14	G15
S11	B11	L0	DOT11	MD	SPA_POINT
S12	B12	L1	DOT12	1	
S13	B13	L2	DOT13	SLEEP	
S14	B14	L3	DOT14	REC	
S15	B15	L4	DOT15	PS	
S16	B16	L5	DOT16	SEG_WAKU	
S17	B17	L6	DOT17	△_MD	
S18	B18		DOT18	TUNED	
S19	B19		DOT19	△_TAPE	
S20	B20			L	
S21	B21			R	

● Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Assignment	F1	F1	F1	NP	D	S21	S20	S19	S18	S17	S16	S15	S14	S13	S12	S11	NL	NL	S10	S9	S8	S7	S6	S5	S4	S3	S2

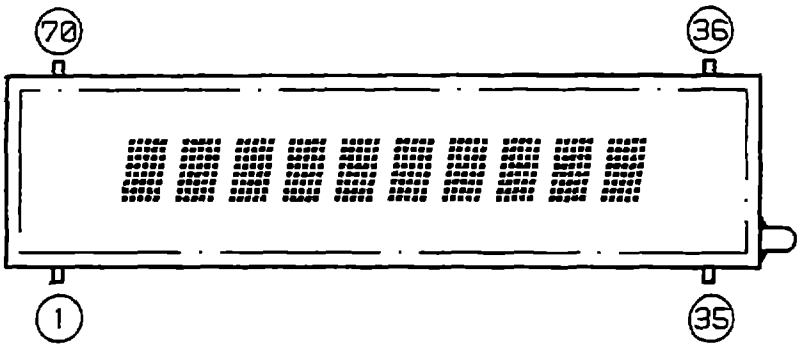
Pin No.	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Assignment	S1	S0	NL	NL	NL	NL	G15	G14	G13	G12	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1	G0	H	NP	F2	F2	F2

F1, F2 : Filament G0~G15 : Grid S0~S21 : Anode D : Connect externally to F1. NP : No Pin NL : No Lead
H : Continuous power supply grid. (Apply a voltage of Typ 30. 0Vdc at ec level.)

■ RAW1153 (V102 : SXDISP ASSY)

● FL TUBE

● Pin Assignment



● Pin Connection

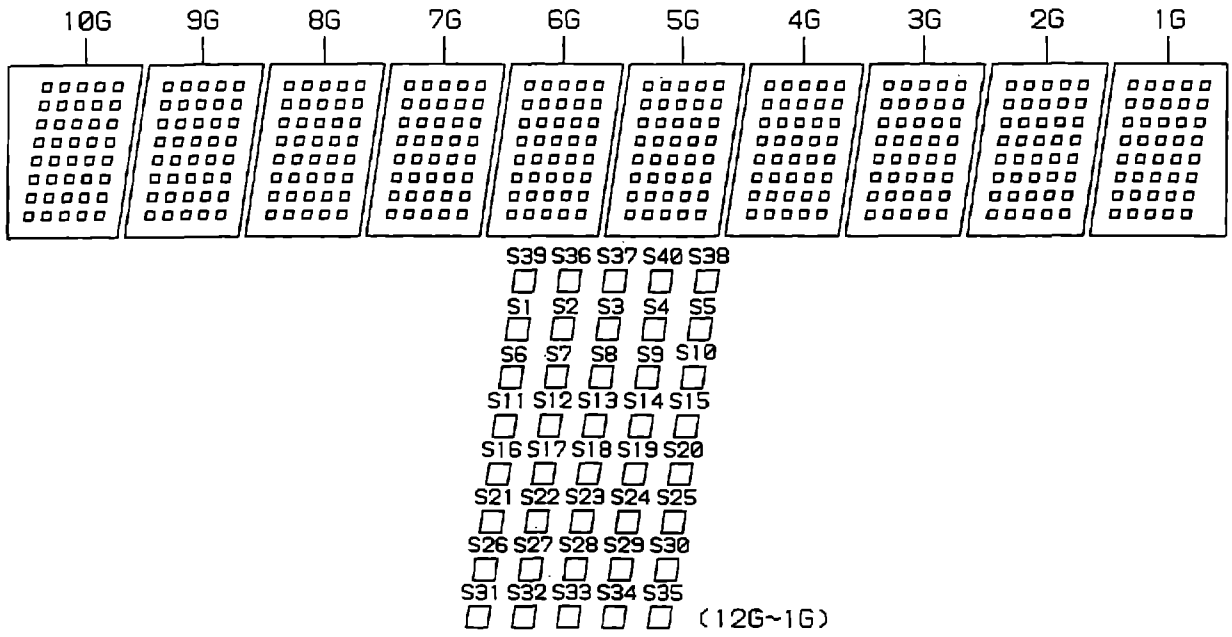
PIN NO.	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
CONNECTION	F1	F1	NP	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	NX	NX	NX	4	3	2	1	IC	NP	F2	F2

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
CONNECTION	F1	F1	NP	1G	2G	3G	4G	5G	NX	NX	NX	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	IC	NP	F2	F2

NOTE

1) F1,F2 --- Filament
2) NP ------ No pin
3) NX ------ No extend pin
4) NC ------ No connection
5) DL ------ Datum Line
6) 1G~10G --- Grid
7) IC ------ Internal connection

● Grid Assignment

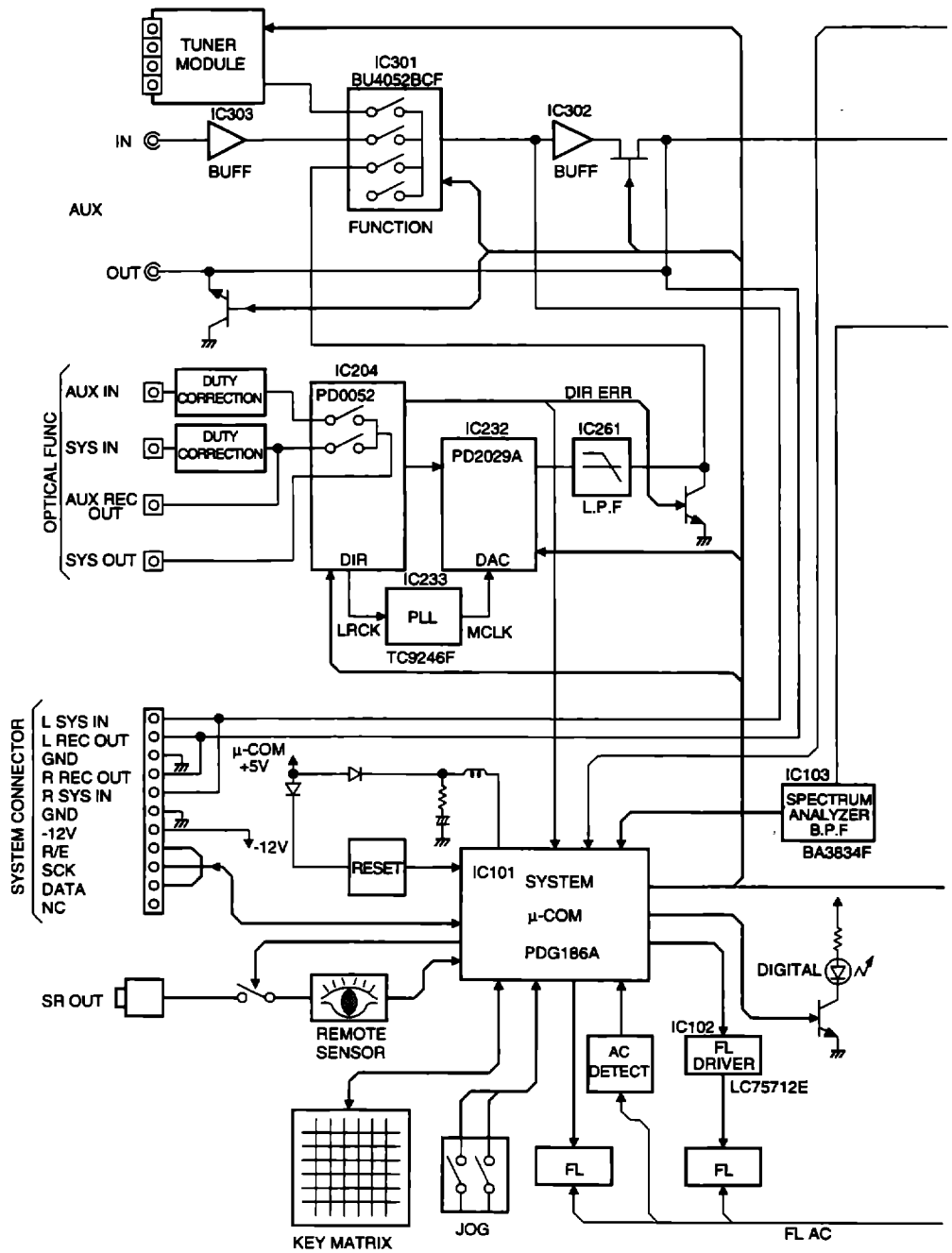


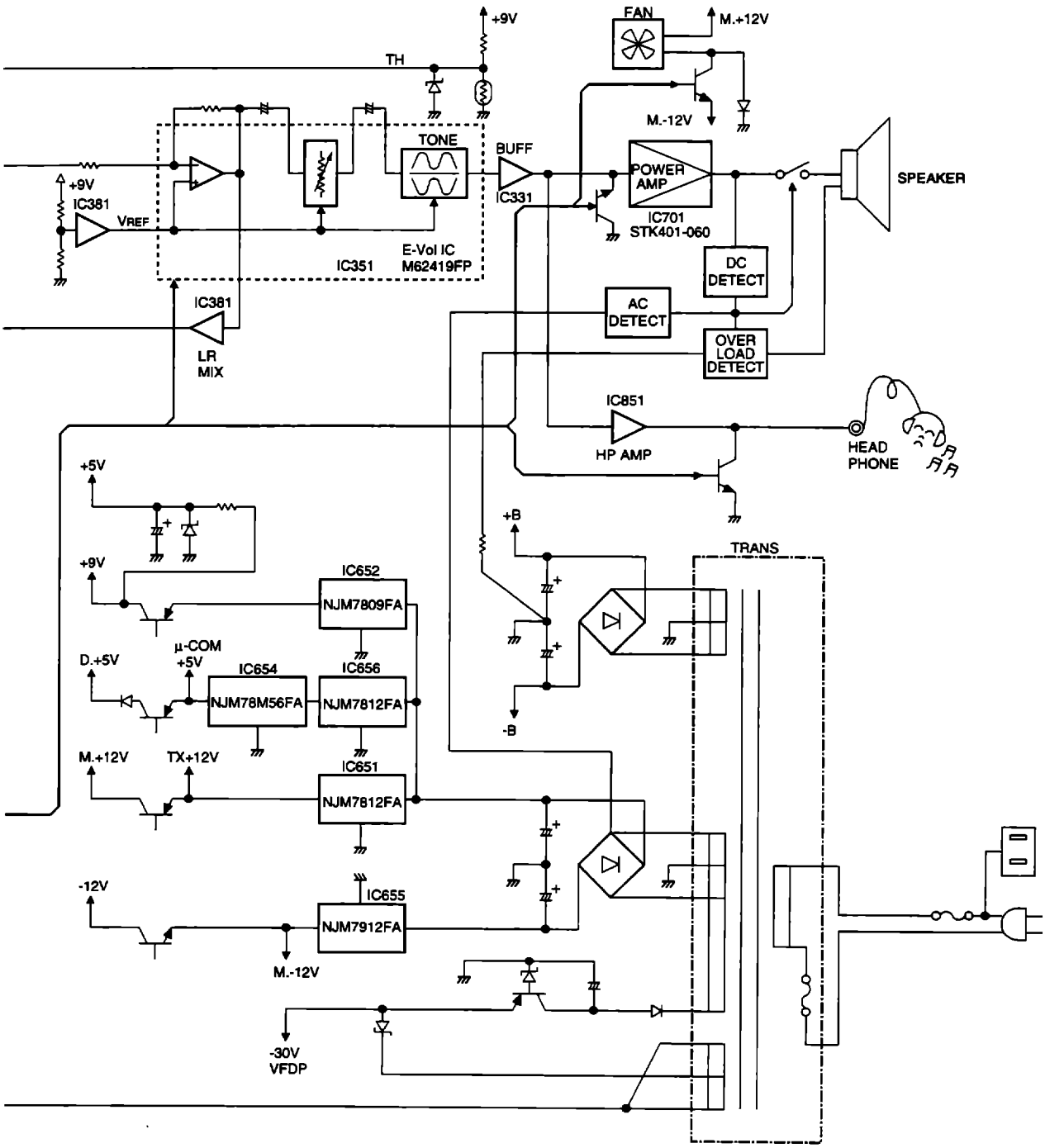
● Anode Connection

	10G~1G
P1	S39
P2	S36
P3	S37
P4	S40
P5	S38
P6	S1
P7	S2
P8	S3
P9	S4
P10	S5
P11	S6
P12	S7
P13	S8
P14	S9
P15	S10
P16	S11
P17	S12
P18	S13
P19	S14
P20	S15

	10G~1G
P21	S16
P22	S17
P23	S18
P24	S19
P25	S20
P26	S21
P27	S22
P28	S23
P29	S24
P30	S25
P31	S26
P32	S27
P33	S28
P34	S29
P35	S30
P36	S31
P37	S32
P38	S33
P39	S34
P40	S35

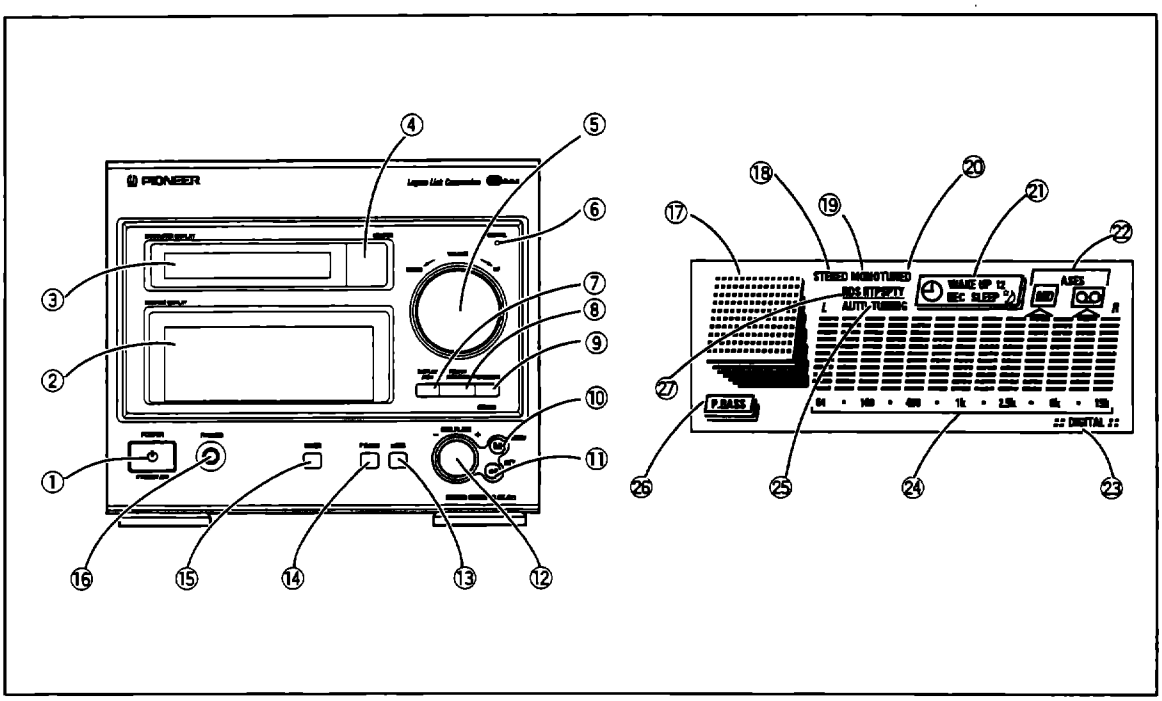
7.2 BLOCK DIAGRAM




+9V
TH
FAN
M.+12V
M.-12V
TONE
BUFF
IC331
POWER AMP
IC701
STK401-060
SPEAKER
+9V
IC381
VREF
IC351
E-Vol IC
M62419FP
DC DETECT
AC DETECT
OVER LOAD DETECT
IC381
LR MIX
IC851
HP AMP
HEAD PHONE
+5V
+B
TRANS
+9V
IC652
NJM7809FA
D.+5V
µ-COM +5V
IC654
NJM78M56FA
IC656
NJM7812FA
-B
M.+12V
TX+12V
IC651
NJM7812FA
-12V
IC655
NJM7912FA
M.-12V
-30V
VFDP

8. PANEL FACILITIES AND SPECIFICATIONS

■ PANEL FACILITIES



STEREO RECEIVER SX-F21

① **POWER, STANDBY/ON switch**

② **Graphic Display**

③ **Character Display**

④ **Remote sensor**

⑤ **VOLUME dial**

⑥ **DIGITAL indicator**
Lights when the component selected with the function selector is connected via digital cable.

⑦ **DISPLAY/RDS button**

⑧ **FM/AM/STATION button**

⑨ **FUNCTION button**

⑩ **MENU button**

⑪ **SET button**

⑫ **MULTI-JOG dial**

⑬ **ASES button**

⑭ **P.BASS button**

⑮ **TIMER button**

⑯ **PHONES jack**
For use with headphones equipped with stereo miniplug. When headphones are connected, sound to the speakers is disabled.

[GRAPHIC DISPLAY]

⑰ Displays function

⑱ Lights during stereo radio reception

⑲ Lights when the MONO button is pressed.

⑳ Lights to indicate reception of radio broadcast

㉑ Timer indicator

㉒ ASES indicator

㉓ DIGITAL indicator

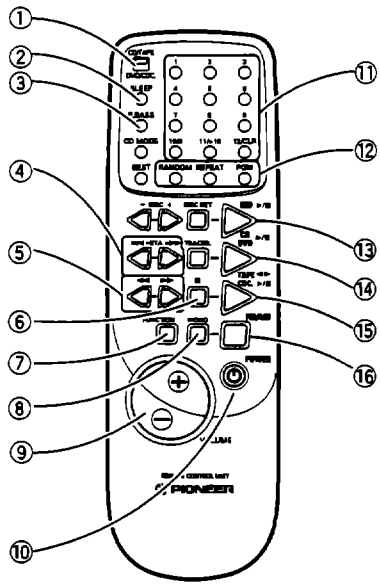
㉔ Spectrum analyzer display

㉕ Lights during the AUTO TUNING mode

㉖ Lights when P. BASS is ON.

㉗ RDS indicator
RT: Lights during FM broadcast reception if RT is selected in the RDS mode.
PS: Lights during FM broadcast reception if PS is selected in the RDS mode.
PTY: Lights during FM broadcast reception if PTY or PTY SEARCH is selected in the RDS mode

The instructions given here describe functions available when the Component Select Switch is set to the "CD/TAPE" position.



REMOTE CONTROL UNIT

■ white characters against a black background indicate functions of the stereo receiver selected with the function buttons.

NOTE:
This remote control unit cannot be used to control the optional PD-F25 CD player.

① **Component select switch**
Use this switch to select the component you wish to operate with the remote control unit. To operate a CD player, cassette deck or MD recorder, set the switch to the upper position. To operate an optional DVD player or CD changer, set the switch to the lower position.

② **SLEEP button**

③ **P.BASS button**

④ TUNER
– STA +: Press to receive broadcasting stations in the order stored in memory.
CD , MD
⏮, ⏭: Press to perform track search.

⑤ CD , MD
◀◀, ▶▶: Fast forward/fast reverse (manual search)
TAPE
◀◀, ▶▶: Fast forward/rewind

⑥ CD , MD , TAPE
■: Stop button

⑦ **FUNCTION button**
Press to select a desired playback component.

⑧ **MONO button**
Press to receive FM broadcasts in monaural mode.

⑨ **VOLUME buttons**

⑩ **POWER button**

⑪ TUNER
1-10, 11, 12: Use to select broadcast stations stored in memory.
Press once: stations 1-12.
Press twice: stations 13-24.
CD , MD
1-10, 11/>10: Press to select tracks.
12/CLR: Press to cancel program.

⑫ CD
RANDOM: Press for random playback
REPEAT: Press for repeat playback
PGM: Press to set programmed playback
MD
RANDOM: Press for random playback
REPEAT: Press for repeat playback
PGM: Press to set programmed playback

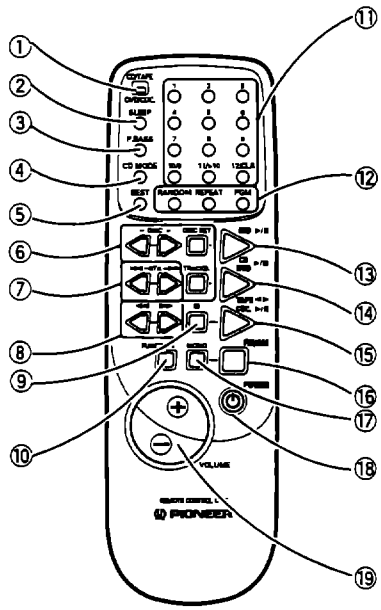
⑬ **MD playback/pause button (►/II)**

⑭ **CD play/pause button (►/II)**

⑮ **TAPE play button (◄ ►)**

⑯ **Tuner band select button (FM/AM)**

The instructions given here describe functions available when the Component Select Switch is set to the "DVD/CDC." position.



■ white characters against a black background indicate functions of the stereo receiver selected with the function buttons.

NOTE:
This remote control unit cannot be used to control the optional PD-F25 CD player.

① **Component select switch**
Use this switch to select the component you wish to operate with the remote control unit. To operate a CD player, cassette deck or MD recorder, set the switch to the upper position. To operate an optional DVD player or CD changer, set the switch to the lower position.

② **SLEEP button**

③ **P.BASS button**

④ **CD MODE button**
Press to select CD changer play.

⑤ **BEST button**
Press to use the CD changer's "best selection" memory.

⑥ CD CHANGER
DISC (+ ,–): Press to select the desired disc.
DISC SET: Press to set the disc when selecting tracks and programs.
TRACK SET: Use to set the track number when selecting tracks and programs.

⑦ DVD
⏮, ⏭: Chapter skip
CD CHANGER
⏮, ⏭: Press for track search.

⑧ DVD
◀◀, ▶▶: Fast forward/fast reverse
CD CHANGER
◀◀, ▶▶: Fast forward/fast reverse (manual search)

⑨ DVD, CD CHANGER
■: Stop

⑩ **FUNCTION button**
Press to select a desired playback component (press successively to cycle between components).

⑪ DVD
1-10, 11/>10: Press to select chapter numbers.
12/CLR: Press to cancel program.
CD CHANGER
1-10, 11/>10: Press to select tracks.
12/CLR: Press to cancel program.

⑫ DVD, CD CHANGER
RANDOM: Press for random playback
REPEAT: Press for repeat playback
PGM: Press to set programmed playback

⑬ **MD playback/pause button (▶/II)**

⑭ **DVD playback/pause button (▶/II)**

⑮ **CD Changer playback/pause button (▶/II)**

⑯ **Tuner band (FM/AM) selector button**

⑰ **MONO button**
Press to receive FM broadcasts in monaural mode.

⑱ **POWER button**

⑲ **VOLUME buttons**

NOTE:
This remote control unit can be used to control an optional DVD player and CD changer.

■ SPECIFICATIONS

Stereo Receiver: SX-F21

Amplifier Section

Continuous power output (RMS) ..... 50 W + 50 W
(1 kHz, THD 10%, 6 Ω)
Continuous power output (DIN) ..... 42 W + 42 W
(1 kHz, THD 1%, 6 Ω)
Music power (DIN) ..... 85 W + 85 W
(1 kHz, THD 1%, 6 Ω)

FM Tuner Section

Frequency Range ..... 87.5 - 108MHz
Antenna ..... 75 Ω, unbalanced

AM Tuner Section

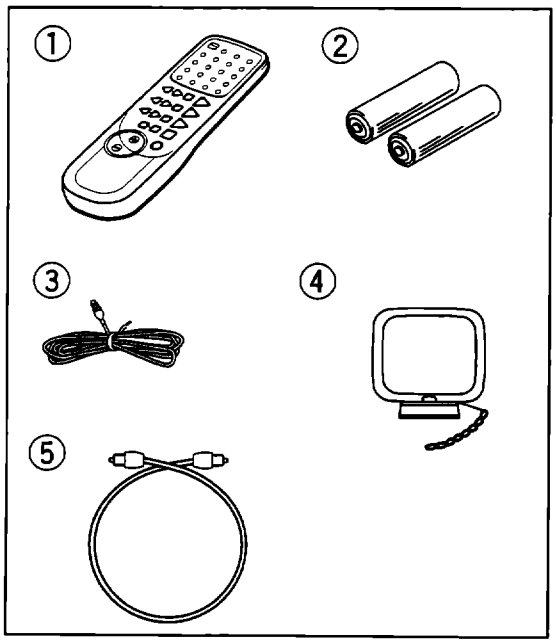
Frequency Range ..... 531 kHz - 1,602 kHz
(9 kHz step);
530 kHz - 1,700 kHz (10 kHz step)
Antenna ..... Loop antenna
Power Requirements ..... AC 230 V, 50/60 Hz
Power Consumption ..... 96 W
Dimensions ..... 190 (W) x 160.5 (H) x 304 (D) mm
Weight ..... 4.5 kg

Accessories

Operating Instructions 1
Warranty Card 1
FM T-type antenna 1
AM loop antenna 1
Remote control unit 1
AAA/R03 dry cell batteries 2
Optical fiber cables 2

NOTE:

Specifications and design subject to possible modification without notice, due to improvements.



① Remote control unit x 1
② AAA/R03 dry cell batteries x 2
③ FM T-type antenna x 1
④ AM loop antenna (Shown assembled) x 1
⑤ Optical fiber cables x 2

Precaution for handling the optical fiber cable

Do not bend the optical fiber cable at a sharp angle since this may damage the cable. Take particular care to avoid bending when installing in a rack, etc. When forming the cable into a loop for storage purposes, make sure that the diameter of the loop is at least 15 cm. When connecting the cable, ensure that the connectors are inserted as far as they will go to safeguard against incomplete connection.